

OMRON

Lighting System 3Z4S-LT Series Datasheet



realizing

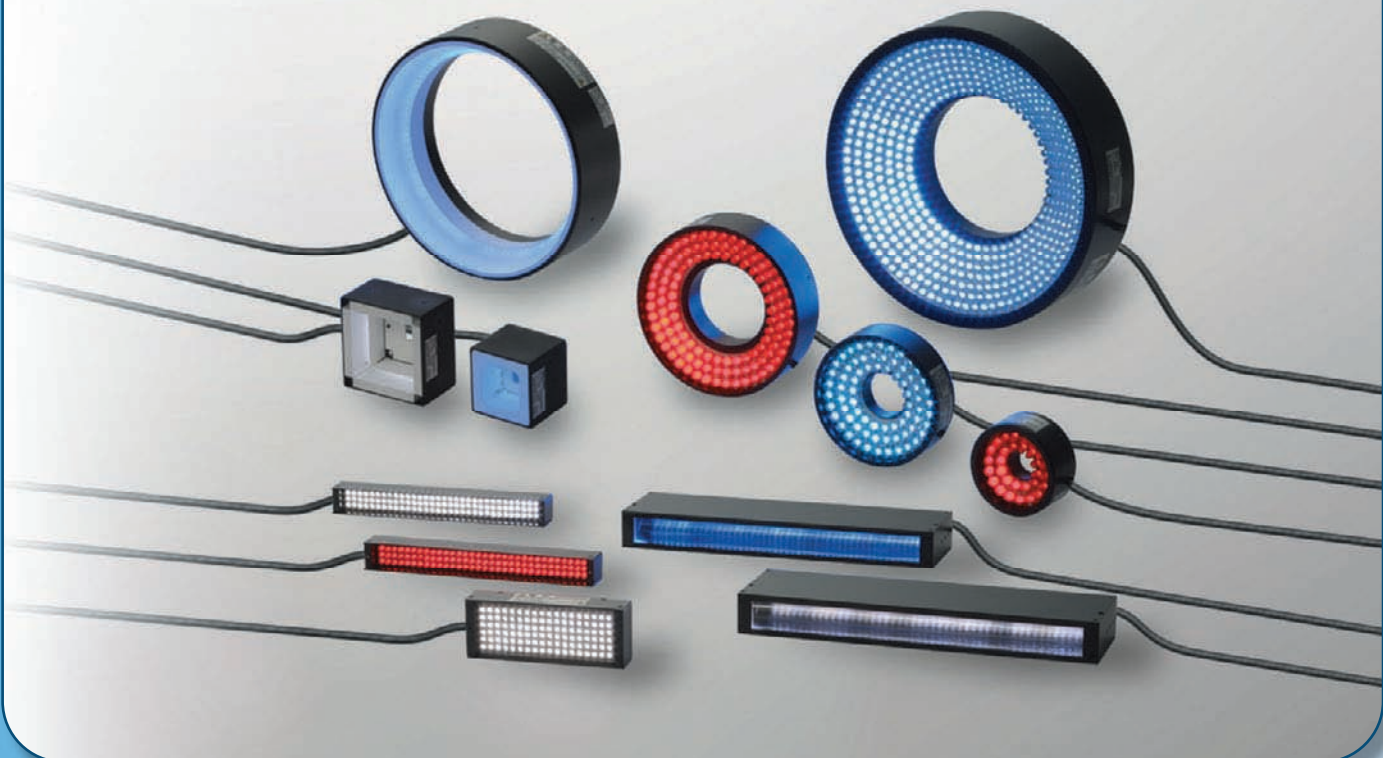
LED
Next Generation

Next-generation MG-Wave[®] LED Illumination Combines Sensor to Provide New Soluti

Illumination Devices are essential for finding solutions to many of the image-processing tasks of Vision Sensors. With this in mind, we have now combined advanced MG-Wave[®] LED Illumination from the broad Moritex range of original and innovative products based on superior illumination technologies with Vision Sensor image-processing technologies and know-how accumulated over the years by OMRON.

This powerful collaboration has yielded a variety of optimal solutions to inspection and measurement needs in automated production applications.

A wide range of products allows you to select the optimal Illumination Device for each application.



with the Vision ons

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Direct Ring Light

Model Number Legend

3Z4S-LT MDRL-C * ○ ○
 Internal diameter of the ring (mm)
 Luminescent color (Red=R, Green=G, Blue=B, White=W)



List of Models

Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MDRL-CR10	A	Red	0.11	50	080	○
MDRL-CB10	A	Blue	0.17		080	○
MDRL-CW10	A	White	0.17		080	○
MDRL-CR16	B	Red	0.24	65	080	○
MDRL-CB16	B	Blue	0.37		080	○
MDRL-CW16	B	White	0.37		080	○
MDRL-CR28	C	Red	0.20	65	080	○
MDRL-CB28	C	Blue	0.31		080	○
MDRL-CW28	C	White	0.31		080	○
MDRL-CR31	D	Red	0.36	130	080	○
MDRL-CB31	D	Blue	0.55		080	○
MDRL-CW31	D	White	0.55		080	○
MDRL-CR35	E	Red	0.34	150	080	○
MDRL-CB35	E	Blue	0.52		080	○
MDRL-CW35	E	White	0.52		080	○
MDRL-CR36	F	Red	0.36	120	080	○
MDRL-CB36	F	Blue	0.55		080	○
MDRL-CW36	F	White	0.55		080	○
MDRL-CR50	G	Red	0.64	180	080	○
MDRL-CB50	G	Blue	0.96		230	×
MDRL-CW50	G	White	0.96		230	×
MDRL-CR56	H	Red	1.12	520	230	×
MDRL-CB56	H	Blue	1.55		230	×
MDRL-CW56	H	White	1.55		230	×

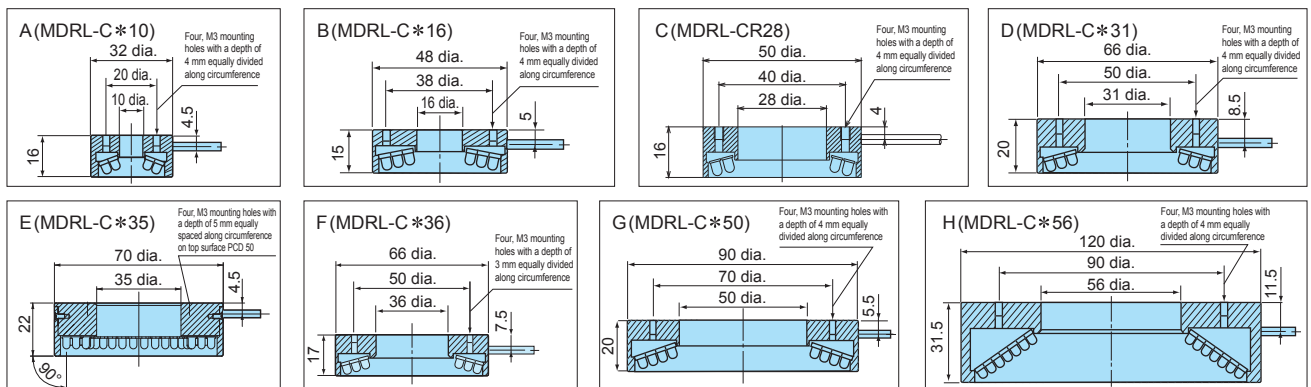
The MDRL-C*35 provides perpendicular illumination to enable a long working distance.
 The recommended working distance is 65 mm or longer, but if a reflective surface is being illuminated, the working distance can be as long as 200 mm.

Options

Diffusion and Polarizing plates are available to prevent the vignetting of image.

For detail, [See "Adapter: MAD Series" on page 21.](#)

Dimensions



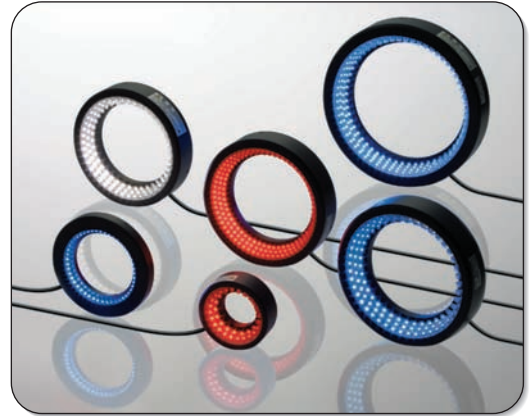
Mounting hole position: Equally spaced starting at a 45° offset from where the cable is connected to the unit. (Hole diameters, depths, and quantities are shown in the drawings.)

Standard cable length: 500 mm

Low Angle Ring Light

Model Number Legend

3Z4S-LT MLRL-C * ○ ○ ○
 Internal diameter of the ring (mm)
 Luminescent color (Red=R, Green=G, Blue=B, White=W)



List of Models

Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MLRL-CR25	A	Red	0.15	70	080	○
MLRL-CB25	A	Blue	0.24		080	○
MLRL-CW25	A	White	0.24		080	○
MLRL-CR46	B	Red	0.17	80	080	○
MLRL-CB46	B	Blue	0.27		080	○
MLRL-CW46	B	White	0.27		080	○
MLRL-CR48	C	Red	0.30	110	080	○
MLRL-CB48	C	Blue	0.47		080	○
MLRL-CW48	C	White	0.47		080	○
MLRL-CR68	D	Red	0.57	190	080	○
MLRL-CB68	D	Blue	0.61		080	○
MLRL-CW68	D	White	0.61		080	○
MLRL-CR100	E	Red	0.96	320	230	×
MLRL-CB100	E	Blue	1.03		230	×
MLRL-CW100	E	White	1.03		230	×

Options

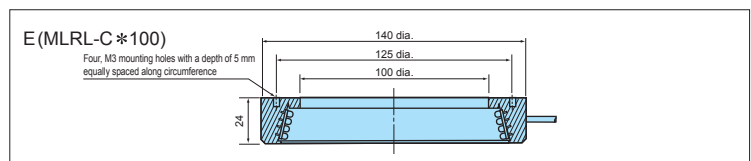
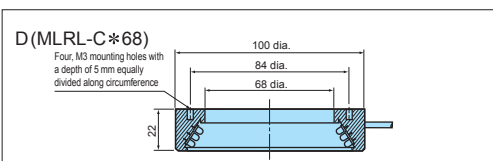
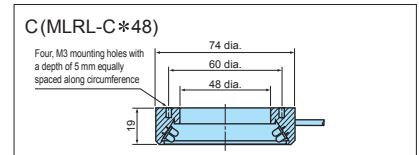
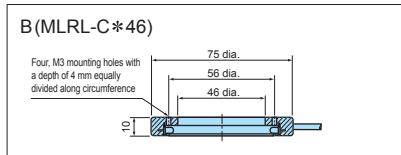
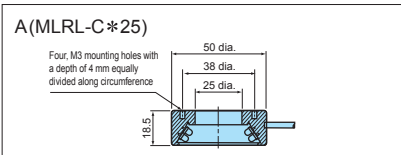
Good for producing more uniform illumination than with direct lighting and for reducing glare and reflections.

Diffusion ring



Model	Applicable model
MDF-LR25	MLRL-C (R,G,B,W) 25
MDF-LR48	MLRL-C (R,G,B,W) 48
MDF-LR68	MLRL-C (R,G,B,W) 68
MDF-LR100	MLRL-C (R,G,B,W) 100

Dimensions



Mounting hole locations: Equally spaced starting at a 45° offset from where the cable is connected to the unit. (Hole diameters, depths, and quantities are shown in the drawings.) Standard cable length: 500 mm

Coaxial Light/Simulated Coaxial Episcopic Light

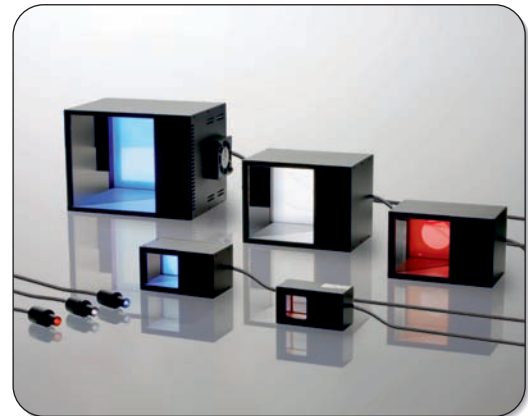
Model Number Legend

Coaxial

3Z4S-LT MCEL-C * ○ ○ ○ ○
 External diameter of the point
 Luminescent color (Red=R, Green=G, Blue=B, White=W)

Simulated Coaxial

3Z4S-LT MSCL-C * ○ ○ ○ ○ - *
 Box height Revision code
 Luminescent color (Red=R, Green=G, Blue=B, White=W)



List of Models

Lineup of Coaxial Light

Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MCEL-CR8	A	Red	0.04	35	080	×
MCEL-CB8	A	Blue	0.03		080	×
MCEL-CW8	A	White	0.03		080	×

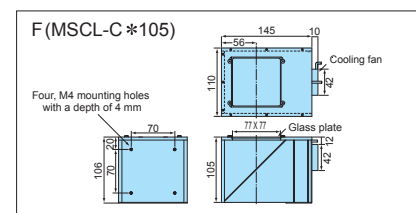
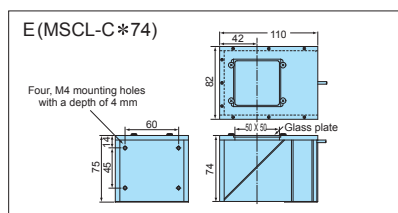
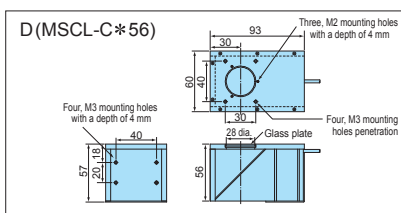
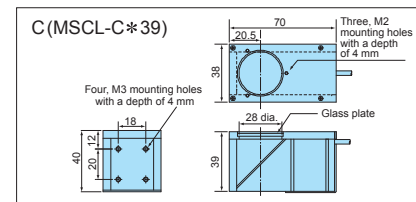
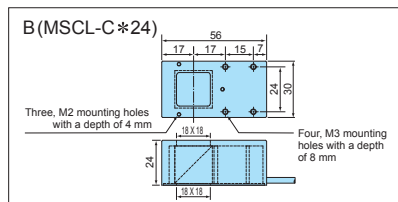
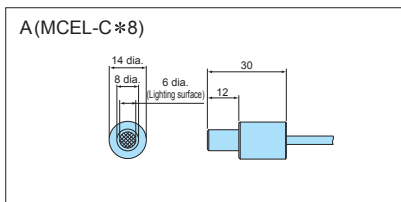
Lineup of Simulated Coaxial Episcopic Light

Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MSCL-CR24	B	Red	0.09	110	080	○
MSCL-CB24	B	Blue	0.20		080	○
MSCL-CW24	B	White	0.20		080	○
MSCL-CR39	C	Red	0.16	160	080	○
MSCL-CB39	C	Blue	0.31		080	○
MSCL-CW39	C	White	0.31		080	○
MSCL-CR56-B	D	Red	0.33	320	080	○
MSCL-CB56-B	D	Blue	0.66		080	○
MSCL-CW56-B	D	White	0.66		080	○
MSCL-CR74-B	E	Red	0.62	520	080	○
MSCL-CB74-B	E	Blue	1.11		230	×
MSCL-CW74-B	E	White	1.11		230	×
MSCL-CR105-B*	F	Red	2.14	920	230	×
MSCL-CB105-B*	F	Blue	2.07		230	×
MSCL-CW105-B*	F	White	2.07		230	×

*Always run the cooling fan to prevent heat build-up.

*A Power Supply Extension Cable (M-RCB00-L) is require for the built-in fan. This is in addition to the normal Extension Cable. [Refer to page 22](#)

Dimensions




Standard cable length: 500 mm


Shadowless Light

Model Number Legend


Shadowless

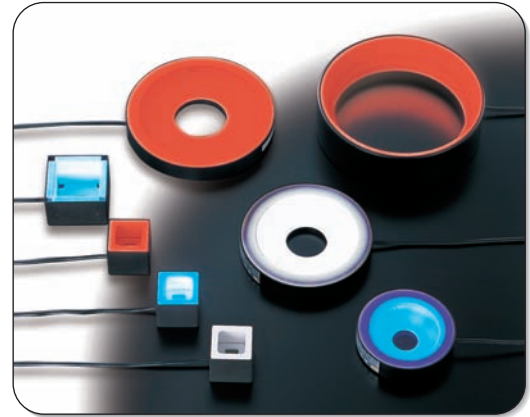
3Z4S-LT MSRL-C * 
 Internal diameter of the ring (mm)
 Luminescent color (Red=R, Green=G, Blue=B, White=W)

Shadowless Low Angle Ring

3Z4S-LT MSLL-C * 
 Internal diameter of the ring (mm)
 Luminescent color (Red=R, Green=G, Blue=B, White=W)

Shadowless Low Angle Square

3Z4S-LT MSQL-C * 
 External side dimension (mm)
 Luminescent color (Red=R, Green=G, Blue=B, White=W)



List of Models

Line up of Shadowless

Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MSRL-CR20	A	Red	0.32	140	080	○
MSRL-CW20	A	White	0.50		080	○
MSRL-CR33	B	Red	0.45	210	080	○
MSRL-CW33	B	White	0.69		080	○
MSRL-CR44	C	Red	0.57	270	080	○
MSRL-CB44	C	Blue	0.80		080	○
MSRL-CW44	C	White	0.80		080	○

Line up of Shadowless Low Angle Ring

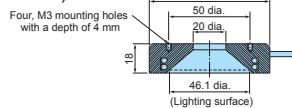
Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MSLL-CR109	D	Red	0.62	320	080	○
MSLL-CW109	D	White	1.10		230	×

Line up of Shadowless Low Angle Square

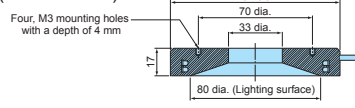
Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MSQL-CW32	E	White	0.14	80	080	○
MSQL-CW48	F	White	0.20	120	080	○

Dimensions

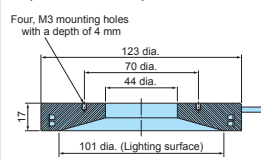
A (MSRL-C*20)



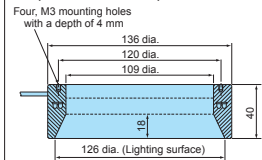
B (MSRL-C*33)



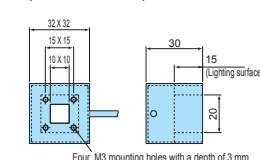
C (MSRL-C*44)



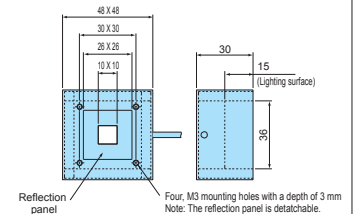
D (MSLL-C*109)



E (MSQL-C*32)



F (MSQL-C*48)



Mounting hole locations:

A to D: Equally spaced starting at a 45° offset from where the cable is connected to the unit. (Hole diameters, depths, and quantities are shown in the drawings.)

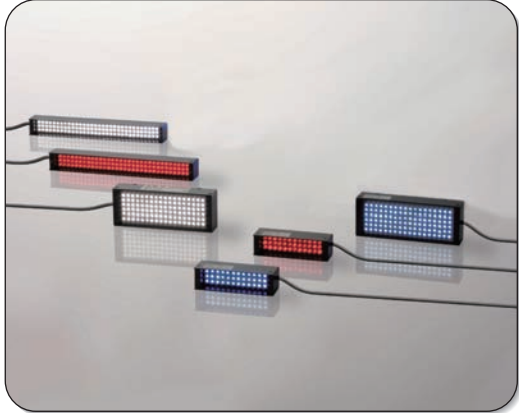
Standard cable length: 500 mm

Bar Light/Line Light

MBRL Series

Model Number Legend

MBRL Series
3Z4S-LT MBRL-C * ○ ○ ○ ○
 Size (length and width)
 Luminescent color (Red=R, Green=G, Blue=B, White=W)

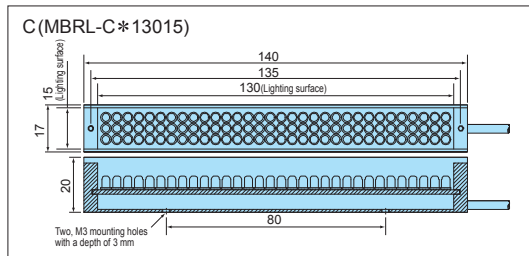
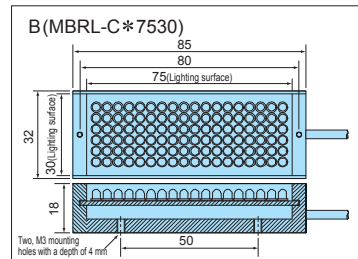
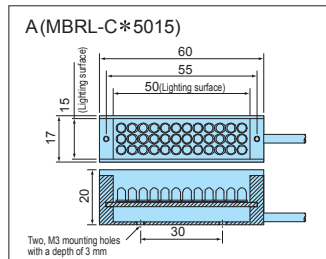


List of Models

Lineup of Bar Light

Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MBRL-CR5015	A	Red	0.13	50	080	○
MBRL-CB5015	A	Blue	0.26		080	○
MBRL-CW5015	A	White	0.26		080	○
MBRL-CR7530	B	Red	0.36	120	080	○
MBRL-CB7530	B	Blue	0.52		080	○
MBRL-CW7530	B	White	0.52		080	○
MBRL-CR13015	C	Red	0.32	85	080	○
MBRL-CB13015	C	Blue	0.53		080	○
MBRL-CW13015	C	White	0.53		080	○

Dimensions



Mounting hole locations:
 A to C: Arranged around the center of the mounting surface.

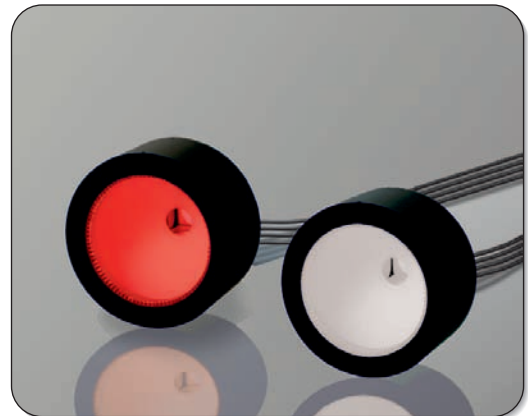
Standard cable length: 500 mm

Dome Light

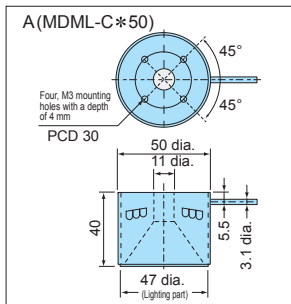
MDML Series

Model Number Legend

3Z4S-LT MDML-C *
 External size
 Luminescent color (Red=R, White=W)



Dimensions



Standard cable length: 500 mm

List of Models

Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MDML-CR50	A	Red	0.24	130	080	○
MDML-CW50	A	White	0.37		080	○

High-powered Spot LED Light

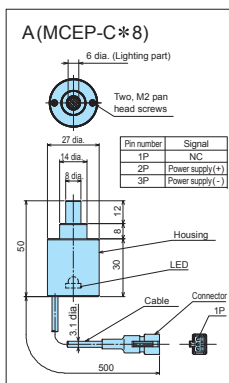
MCEP Series

Model Number Legend

3Z4S-LT MCEP-C * 8
 Luminescent color
 (Red=R, Green=G, Blue=B, White=W)

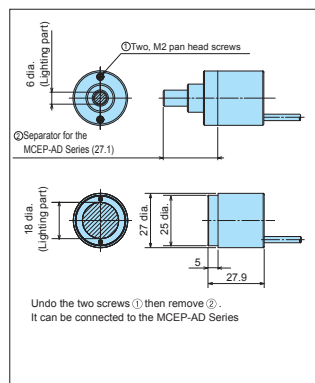


Dimensions



Standard cable length: 500 mm

Removing the Point Rod



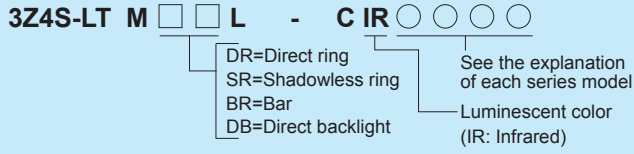
List of Models

Model	Dimension	Luminescent Color	Dominant wavelength*	Color temperature	Max. rated current IFM (A)	Weight (g)	Connection to strobe controller
MCEP-CR8	A	Red	620.5~645nm	—	0.35	50	×
MCEP-CB8	A	Blue	470~480nm	—	0.35		×
MCEP-CW8	A	White	All	5000~6000K	0.35		×

*The dominant wavelength of visible color according to CIE color coordinates. There are differences in the illuminated color for the dominant wavelengths of these LEDs. Colors may appear to be different even for the same model number.

IR Light

Model Number Legend

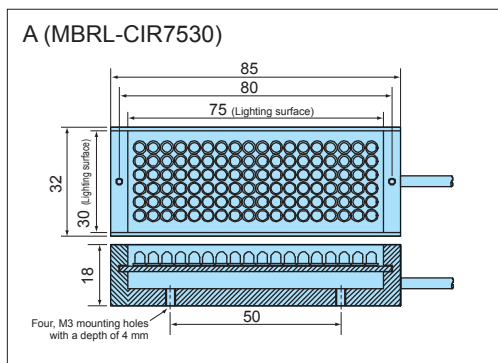


List of Models

Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MBRL-CIR7530	A	Infrared	0.40	120	080	<input type="checkbox"/>

*The dominant wavelength of visible color according to CIE color coordinates. There are differences in the illuminated color for the dominant wavelengths of these LEDs. Colors may appear to be different even for the same model number.

Dimensions



Mounting hole locations: C: Arranged around the center of the mounting surface. Standard cable length: 500 mm

Direct Backlight

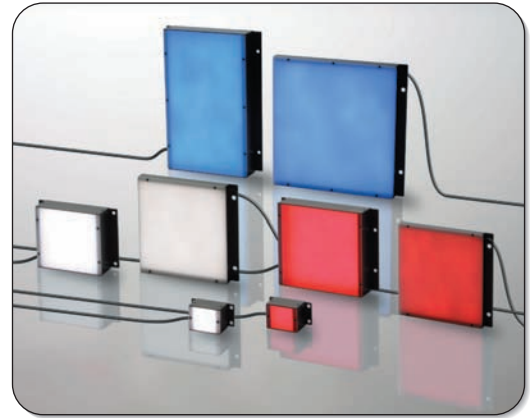
Model Number Legend

Shell type

3Z4S-LT MDBL-C * ○ ○ ○
 Size (length and width)
 Luminescent color (Red=R, Green=G, Blue=B, White=W)

Chip mounting type

3Z4S-LT MDBC-C * ○ ○ ○
 Chip type
 Size (length and width)
 Luminescent color (Red=R, Green=G, Blue=B, White=W)



List of Models

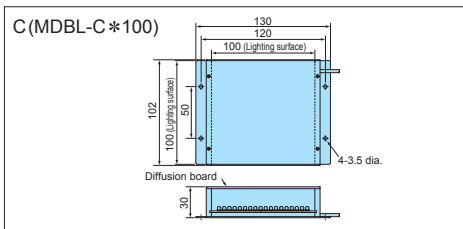
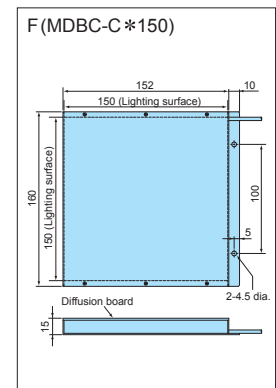
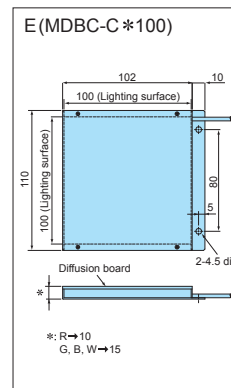
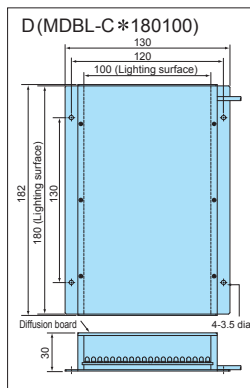
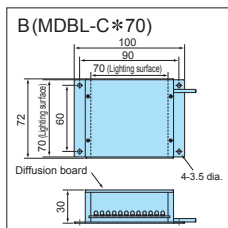
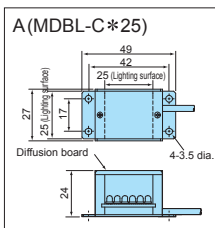
Lineup of Shell type

Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MDBL-CR25	A	Red	0.14	60	080	○
MDBL-CB25	A	Blue	0.27		080	○
MDBL-CW25	A	White	0.27		080	○
MDBL-CR70	B	Red	0.48	190	080	○
MDBL-CB70	B	Blue	0.96		230	×
MDBL-CW70	B	White	0.96		230	×
MDBL-CR100	C	Red	1.43	290	230	×
MDBL-CB100	C	Blue	1.55		230	×
MDBL-CW100	C	White	1.55		230	×
MDBL-CR180100	D	Red	2.30	520	230	×
MDBL-CB180100	D	Blue	2.30		230	×
MDBL-CW180100	D	White	2.30		230	×

Lineup of Chip mounting type

Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MDBC-CR100	E	Red	0.81	170	230	×
MDBC-CW100	E	White	0.95		230	×
MDBC-CR150	F	Red	0.99	310	230	×
MDBC-CW150	F	White	2.14		230	×

Dimensions

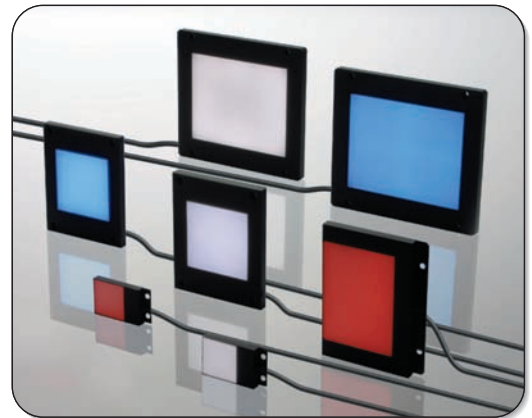


Standard cable length: 500 mm

Edge-type Backlight

Model Number Legend

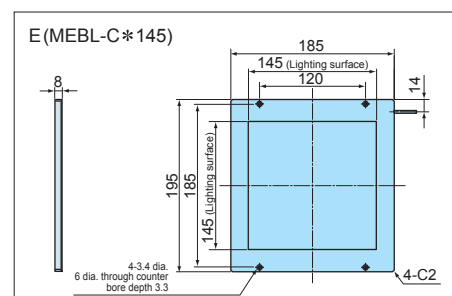
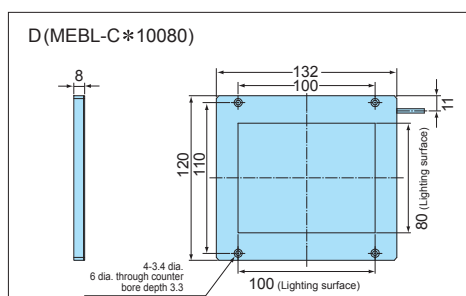
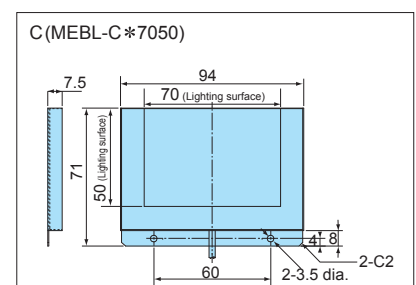
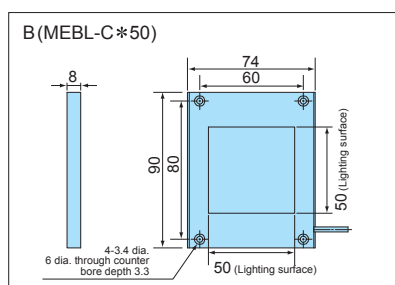
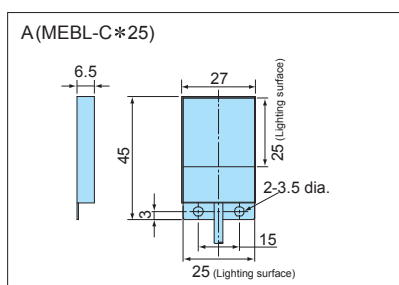
3Z4S-LT MEBL-C * ○ ○ ○ ○
 Luminescent color (Red=R, Green=G, Blue=B, White=W)
 Size (length and width)



List of Models

Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MEBL-CR25	A	Red	0.03	45	080	○
MEBL-CB25	A	Blue	0.04		080	○
MEBL-CW25	A	White	0.04		080	○
MEBL-CR50	B	Red	0.17	110	080	○
MEBL-CB50	B	Blue	0.29		080	○
MEBL-CW50	B	White	0.29		080	○
MEBL-CR7050	C	Red	0.15	140	080	○
MEBL-CB7050	C	Blue	0.25		080	○
MEBL-CW7050	C	White	0.25		080	○
MEBL-CR10080	D	Red	0.32	230	080	○
MEBL-CB10080	D	Blue	0.57		080	○
MEBL-CW10080	D	White	0.57		080	○
MEBL-CR145	E	Red	0.45	460	080	○
MEBL-CB145	E	Blue	0.8		080	○
MEBL-CW145	E	White	0.8		080	○

Dimensions

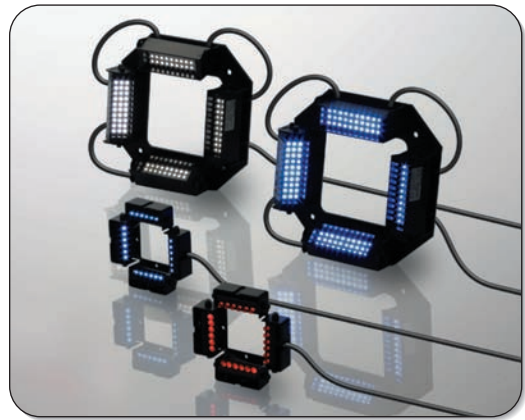


Standard cable length: 500 mm

Square Oblique Light

Model Number Legend

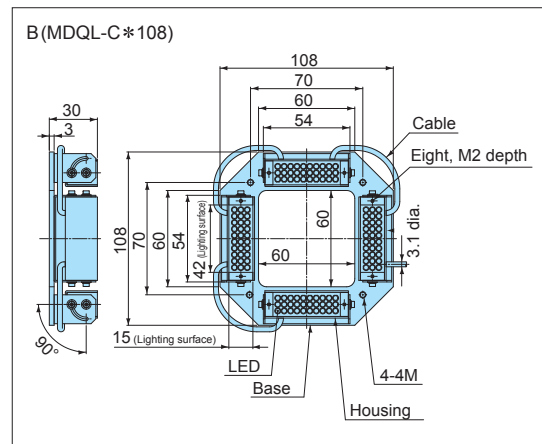
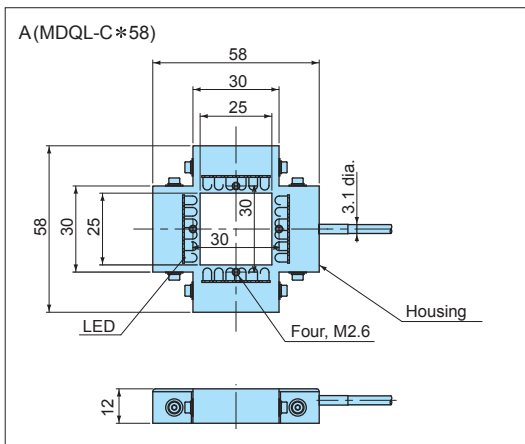
3Z4S-LT MDQL-C * ○ ○ ○ ○
 Luminescent color (Red=R, Green=G, Blue=B, White=W)
 External size



List of Models

Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MDQL-CR58	A	Red	0.09	55	080	○
MDQL-CW58	A	White	0.17		080	○
MDQL-CR108	B	Red	0.42	210	080	○
MDQL-CW108	B	White	0.84		230	x

Dimensions



Standard cable length: 500 mm

Spot Led Light

MSPP Series

(CE Marking)

Model Number Legend

3Z4S-LT MSPP-C * ○ ○

○ Effective size (Lighting part)
○ Luminescent color (Red=R, White=W)

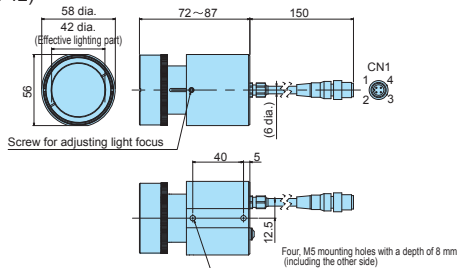
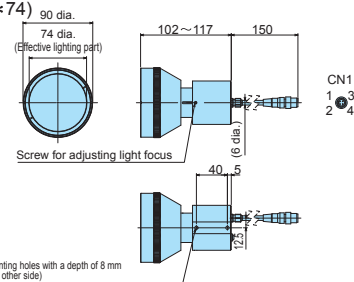
List of Models
Wide projection

Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MSPP-CR42	A	Red	0.7	460g	MLEP-A070 series	×
MSPP-CW42	A	White	0.7	460g	MLEP-A070 series	×

Narrow projection

Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MSPP-CR74	B	Red	0.7	600g	MLEP-A070 series	×
MSPP-CW74	B	White	0.7	600g	MLEP-A070 series	×

*Always connect a Conversion Cable (3Z4S-LT M-RCB301XS) when connecting the power supply.


Dimensions
A (MSPP-C*42)

B (MSPP-C*74)


Parallel Light

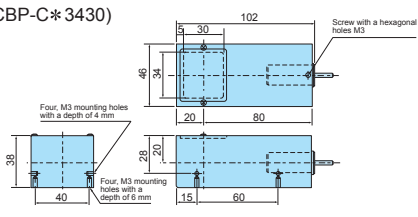
MCBP Series
Model Number Legend

3Z4S-LT MCBP-C * ○ ○ ○ ○

○ Size (length and width)
○ Luminescent color (Red=R, White=W)

List of Models

Model	Dimension	Luminescent Color	Max. rated current IFM (A)	Weight (g)	Power supply	Connection to strobe controller
MCBP-CB3430	A	Blue	0.07	260	080	×
MCBP-CW3430	A	White	0.07		080	×

Dimensions
A (MCBP-C*3430)


New Power Supplies for MCEP/MSPP Series

These constant-current power supplies are designed specifically for the MCEP Series of High-power LED Spot Lights and MSPP Series of LED Spot Lights.

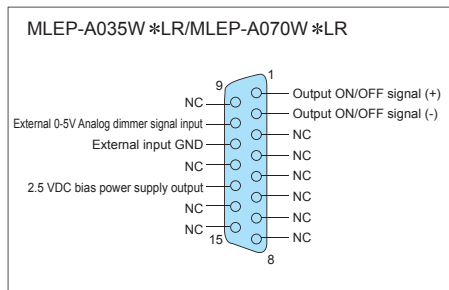
NEW MLEP Analog Series

Models are available with an analog light adjustment and for either one or three channels. A wide voltage input (100 to 240 VAC) is supported, along with CE Marking.

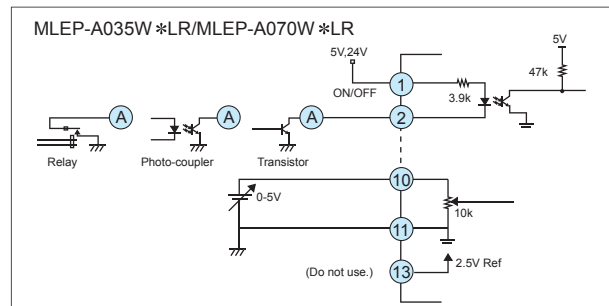
Ratings and Specifications

Model	MLEP-A035W 1LR-100V	MLEP-A035W1 LR-200V	MLEP-A070W1 LR-100V	MLEP-A070W1 LR-200V	MLEP-A035W3 LR-100V	MLEP-A035W3 LR-200V	MLEP-A070W3 LR-100V	MLEP-A070W3 LR-200V
AC Type	100V	200V	100V	200V	100V	200V	100V	200V
Output	Single-channel out put max.350 mA		Single-channel out put max.700 mA		3-channel out put for each channel max.350 mA		3-channel out put for each channel max.700 mA	
Dimension	A				B			
Input voltage	100 - 240V AC 50 / 60Hz				100 - 240V AC 50 / 60Hz			
Input current	0.35 / 0.25A (at AC 100/240V)				0.35/0.25 A (at AC 100/240V)			
Surge current	20A or lower (at 100V AC) 40A or lower (at 240V AC)				20A or lower (at 100V AC) 40A or lower (at 240V AC)			
Operating temperature	0 to +45°C				0 to +45°C			
Output system	Continuous DC output				Continuous DC output			
Output control system	Constant current control (the current can be changed)				Constant current control (the current can be changed)			
External light control	Supported (0 to 5V)				Supported (0 to 5V)			
Lighting on/off function	Supported (photocoupler insulation)				Supported (photocoupler insulation)			
Cooling system	Natural air cooling				forcible air cooling			
Installation	Horizontal installation on the rubber supports at the bottom of the unit				Horizontal installation on the rubber supports at the bottom of the unit			
Weight	Approximately 0.9kg				Approximately 1.4kg			

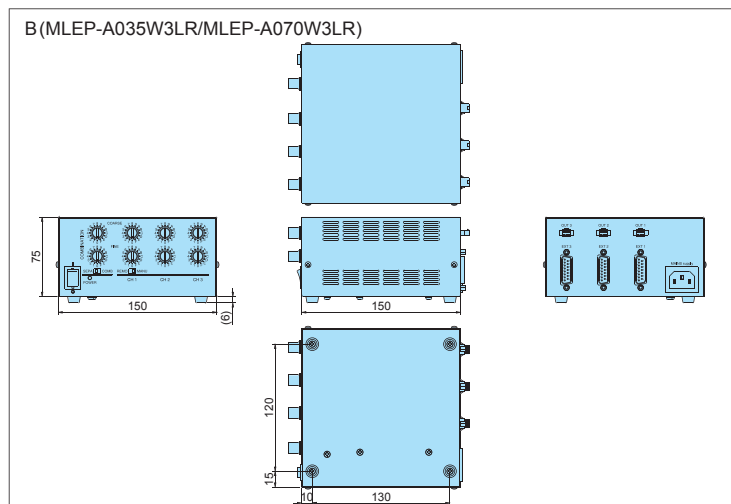
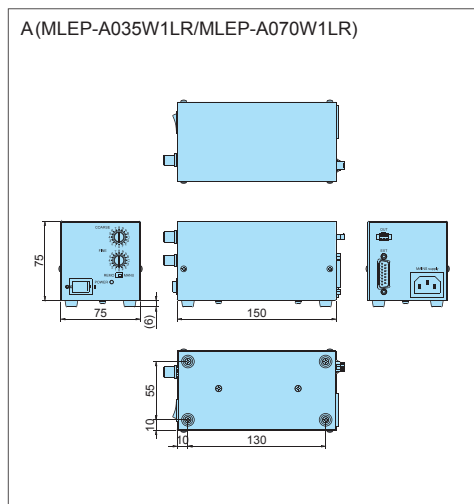
Connection Specifications



I/O Circuit Diagrams



Dimensions



Model Number Legend

3Z4S-LT MLEP-A *W*LR* - ***V**

Maximum output current Output channel AC type
 Digital type(D)



NEW MLEP Digital Series

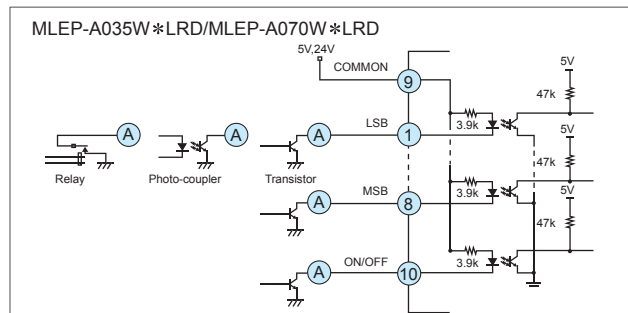
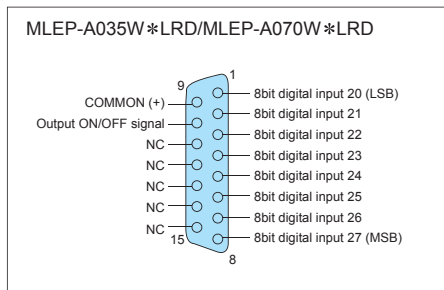
Models are available with a digital light adjustment and for either one or three channels.
 A wide voltage input (100 to 240 VAC) is supported, along with CE Marking.

Ratings and Specifications

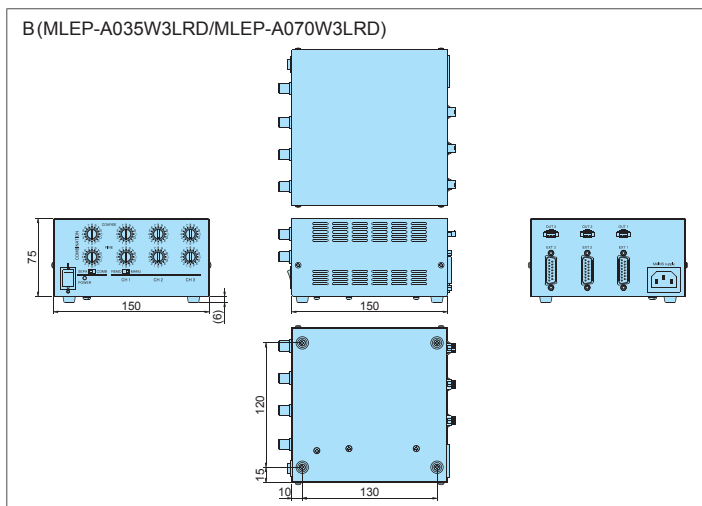
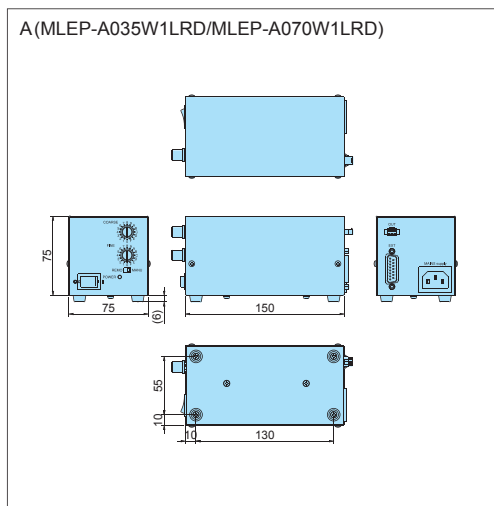
Model	MLEP-A035W1 LRD-100V	MLEP-A035W1 LRD-200V	MLEP-A070W1 LRD-100V	MLEP-A070W1 LRD-200V	MLEP-A035W3 LRD-100V	MLEP-A035W3 LRD-200V	MLEP-A070W3 LRD-100V	MLEP-A070W3 LRD-200V
AC Type	100V	200V	100V	200V	100V	200V	100V	200V
Output	Single-channel out put max.350 mA		Single-channel out put max.700 mA		3-channel out put for each channel max.350 mA		3-channel out put for each channel max.700 mA	
Dimension	A				B			
Input voltage	100 - 240V AC 50 / 60Hz				100 - 240V AC 50 / 60Hz			
Input current	0.35 / 0.25A (at AC 100/240V)				0.35/0.25 A (at AC 100/240V)			
Surge current	20A or lower (at 100V AC) 40A or lower (at 240V AC)				20A or lower (at 100V AC) 40A or lower (at 240V AC)			
Operating temperature	0 to +45°C				0 to +45°C			
Output system	Continuous DC output				Continuous DC output			
Output control system	Constant current control (the current can be changed)				Constant current control (the current can be changed)			
External light control	Supported (8bit digital)				Supported (for each channel, 8bit digital)			
Lighting on/off function	Supported (photocoupler insulation)				Supported (photocoupler insulation)			
Cooling system	Natural air cooling				forcible air cooling			
Installation	Horizontal installation on the rubber supports at the bottom of the unit				Horizontal installation on the rubber supports at the bottom of the unit			
Weight	Approximately 0.9kg				Approximately 1.4kg			

Connection Specifications

I/O Circuit Diagrams



Dimensions



New Power Supplies for MG-Wave Series

These new power supplies are designed specifically for Moritex Constant-current LED Lights (except for the MCEP Series). Even when combining with an LED Light from the broad lineup and possible applications, you can select the ideal Constant-current Power Supply for the required current consumption. The Power Supplies suppress heat generation and will make the most of the characteristics of any of the LED Light. External output controls and other features are also provided.

A080/230W Analog Series (Total current: 0.8 A or 2.3 A)

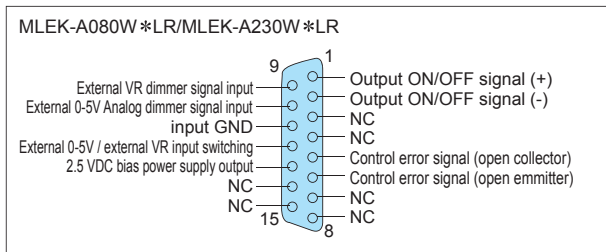
Models are available with an analog light adjustment and for either one or two channels. A wide voltage input (100 to 240 VAC) is supported, along with CE Marking.

Ratings and Specifications

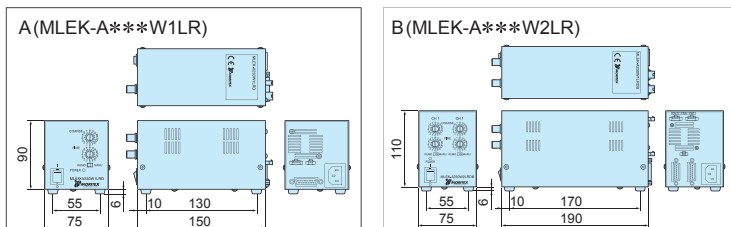
Model	MLEK-A080W1LR-100V	MLEK-A080W1LR-200V	MLEK-A080W2LR-100V	MLEK-A080W2LR-200V
AC Type	100V	200V	100V	200V
Output	Single-channel output of 0.8A (for connection to all lights except the MCEP Series)		Two-channel maximum, output of 0.8A for each channel (for connection to all lights except the MCEP Series)	
Input voltage	100 - 240V AC 50 / 60Hz		100 - 240V AC 50 / 60Hz	
Dimension	A		B	
Input current	0.3 / 0.15A (at AC 100/240V)		0.3 / 0.15A (at AC 100/240V)	
Surge current	15A or lower (at 100V AC) 35A or lower (at 240V AC)		15A or lower (at 100V AC) 35A or lower (at 240V AC)	
Operating temperature	0 to +45°C		0 to +45°C	
Output system	Continuous DC output		Continuous DC output	
Output control system	Constant current control (the current can be changed)		Constant current control (the current can be changed)	
External light control	Supported (0 to 5V)		Supported (0 to 5V)	
Lighting on/off function	Supported (photocoupler insulation)		Supported (photocoupler insulation)	
Error output	Supported (photocoupler insulation, control error)		Supported (photocoupler insulation, control error)	
Cooling system	Natural air cooling		Natural air cooling	
Installation	Horizontal installation on the rubber supports at the bottom of the unit		Horizontal installation on the rubber supports at the bottom of the unit	
Weight	Approximately 1kg		Approximately 1.3kg	

Model	MLEK-A230W1LR-100V	MLEK-A230W1LR-200V	MLEK-A230W2LR-100V	MLEK-A230W2LR-200V
AC Type	100V	200V	100V	200V
Output	Single-channel output of 2.3A (for connection to all lights except the MCEP Series)		Two-channel maximum, output of 2.3A for each channel (for connection to all lights except the MCEP Series)	
Input voltage	100 - 240V AC 50 / 60Hz		100 - 240V AC 50 / 60Hz	
Dimension	A		B	
Input current	0.7 / 0.4A (at AC 100/240V)		0.7 / 0.4A (at AC 100/240V)	
Surge current	15A or lower (at 100V AC) 35A or lower (at 240V AC)		15A or lower (at 100V AC) 35A or lower (at 240V AC)	
Operating temperature	0 to +45°C		0 to +45°C	
Output system	Continuous DC output		Continuous DC output	
Output control system	Constant current control (the current can be changed)		Constant current control (the current can be changed)	
External light control	Supported (0 to 5V dimmer signal / External VR input)		Supported (0 to 5V dimmer signal / External VR input)	
Lighting on/off function	Supported (photocoupler insulation)		Supported (photocoupler insulation)	
Error output	Supported (photocoupler insulation, control error)		Supported (photocoupler insulation, control error)	
Cooling system	forcible air cooling		forcible air cooling	
Installation	Horizontal installation on the rubber supports at the bottom of the unit		Horizontal installation on the rubber supports at the bottom of the unit	
Weight	Approximately 1.1kg		Approximately 1.4kg	

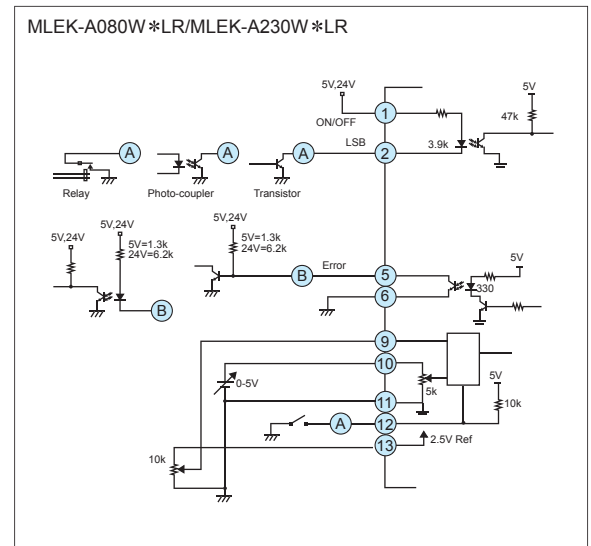
Connection Specifications



Dimensions



I/O Circuit Diagrams



Model Number Legend

3Z4S-LT MLEK-A *W*LR* - *** V**

Maximum output current Output channel AC type
 Digital type (D)



A080/230W Digital Series (Total current: 0.8 A or 2.3 A)

Models are available with a digital light adjustment and for either one or two channels. A wide voltage input (100 to 240 VAC) is supported, along with CE Marking.

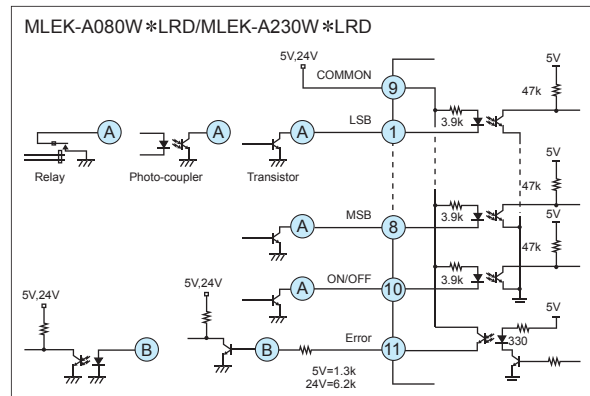
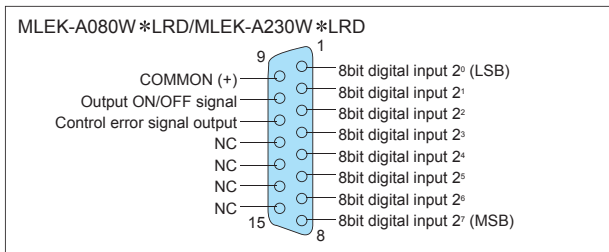
Ratings and Specifications

Model	MLEK-A080W1LRD-100V	MLEK-A080W1LRD-200V	MLEK-A080W2LRD-100V	MLEK-A080W2RD-200V
AC Type	100V	200V	100V	200V
Output	Single-channel output of 0.8A (for connection to all lights except the MCEP Series)		Two-channel maximum, output of 0.8A for each channel (for connection to all lights except the MCEP Series)	
Input voltage	100 - 240V AC 50 / 60Hz		100 - 240V AC 50 / 60Hz	
Dimension	A		B	
Input current	0.3 / 0.15A (at AC 100/240V)		0.3 / 0.15A (at AC 100/240V)	
Surge current	15A or lower (at 100V AC) 35A or lower (at 240V AC)		15A or lower (at 100V AC) 35A or lower (at 240V AC)	
Operating temperature	0 to +45°C		0 to +45°C	
Output system	Continuous DC output		Continuous DC output	
Output control system	Constant current control (the current can be changed)		Constant current control (the current can be changed)	
External light control	Supported (8bit digital)		Supported (for each channel, 8bit digital)	
Lighting on/off function	Supported (photocoupler insulation)		Supported (photocoupler insulation)	
Error output	Supported (photocoupler insulation, control error)		Supported (photocoupler insulation, control error)	
Cooling system	Natural air cooling		Natural air cooling	
Installation	Horizontal installation on the rubber supports at the bottom of the unit		Horizontal installation on the rubber supports at the bottom of the unit	
Weight	Approximately 1kg		Approximately 1.3kg	

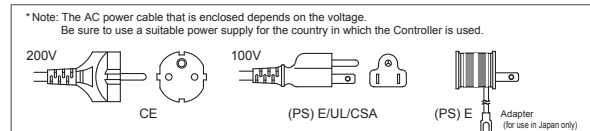
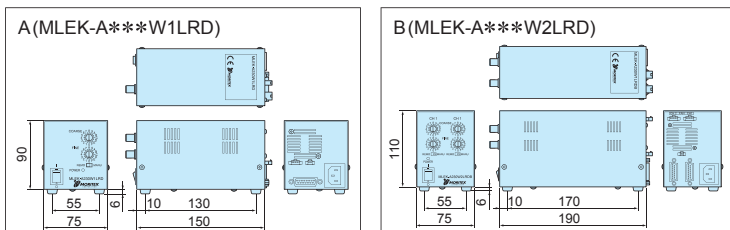
Model	MLEK-A230W1LRD-100V	MLEK-A230W1LRD-200V	MLEK-A230W2LRDB-100V	MLEK-A230W2LRDB-200V
AC Type	100V	200V	100V	200V
Output	Single-channel output of 2.3A (for connection to all lights except the MCEP Series)		Two-channel maximum, output of 2.3A for each channel (for connection to all lights except the MCEP Series)	
Input voltage	100 - 240V AC 50 / 60Hz		100 - 240V AC 50 / 60Hz	
Dimension	A		B	
Input current	0.7 / 0.4A (at AC 100/240V)		0.7 / 0.4A (at AC 100/240V)	
Surge current	15A or lower (at 100V AC) 35A or lower (at 240V AC)		15A or lower (at 100V AC) 35A or lower (at 240V AC)	
Operating temperature	0 to +45°C		0 to +45°C	
Output system	Continuous DC output		Continuous DC output	
Output control system	Constant current control (the current can be changed)		Constant current control (the current can be changed)	
External light control	Supported (8bit digital)		Supported (for each channel, 8bit digital)	
Lighting on/off function	Supported (photocoupler insulation)		Supported (photocoupler insulation)	
Error output	Supported (photocoupler insulation, control error)		Supported (photocoupler insulation, control error)	
Cooling system	forcible air cooling		forcible air cooling	
Installation	Horizontal installation on the rubber supports at the bottom of the unit		Horizontal installation on the rubber supports at the bottom of the unit	
Weight	Approximately 1.1kg		Approximately 1.4kg	

Connection Specifications

I/O Circuit Diagrams



Dimensions



Model Number Legend Multichannel series

3Z4S-LT MLEK- D770W4LRD- *** V
 |
 AC type

Multichannel series

Models are available with a digital light adjustment and for four channels. A wide voltage input (100 to 240 VAC) is supported, along with Rohs compliance.

The digital light adjustment provides the previous 8-bit, 256-step control and a new 10-bit, 1,024-step control.

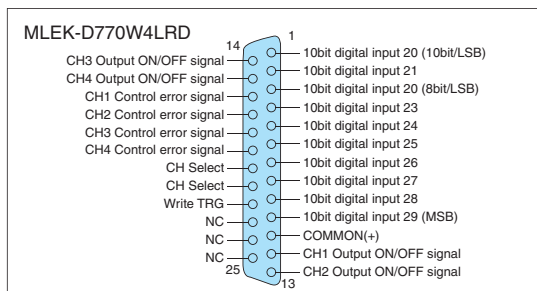
*CE Marking.



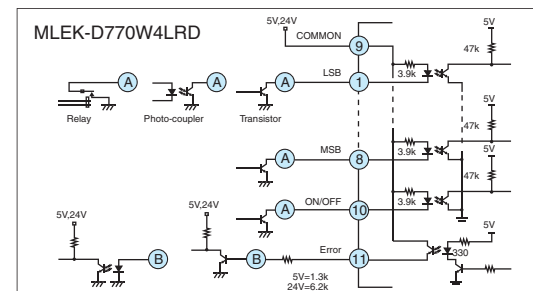
Ratings and Specifications

Model	MLEK-D770W4LRD-100V	MLEK-D770W4LRD-200V
AC Type	100V	200V
Output	4-channel output Total max. 7.7A (CH1~ CH3:max. 2.3A CH4:max. 0.8A) (for connection to all lights except the MCEP Series)	
Input voltage	100 - 240V AC 50 / 60Hz	
Dimension	A	
Input current	1.7/0.8 A (at AC 100/240V)	
Surge current	18A or lower (at 100V AC) 41A or lower (at 230V AC)	
Operating temperature	0 to +45°C	
Output system	Continuous DC output	
Output control system	Constant current control (the current can be changed)	
External light control	Supported (for each channel, 8bit digital or 10 bit digital)	
Lighting on/off function	Supported (photocoupler insulation)	
Error output	Supported (photocoupler insulation, control error)	
Cooling system	forcible air cooling	
Installation	Horizontal installation on the rubber supports at the bottom of the unit	
Weight	Approximately 2kg	

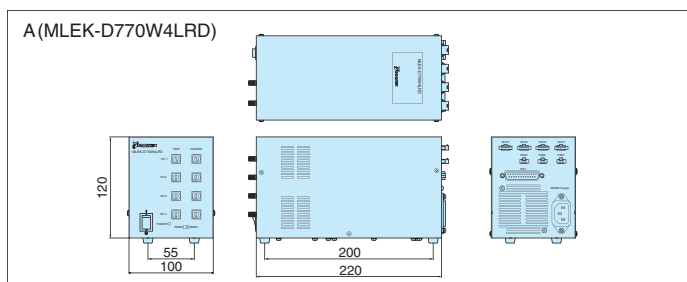
Connection Specifications



I/O Circuit Diagrams



Dimensions



Optional Accessories

*When ordering, provide the specific model number after "SZ4S-LT" (example: SZ4S-LT MDF-DR10).

Options for lights

The following optional accessories are available to improve the functionality of the lighting devices.

Diffusion plate:MDF Series

The MDF series features a diffusion plate that increases the light diffusion and reduces reflection and glare from the element.

Model	Product type	Compatible light models
MDF-DQ108	Square oblique light diffusion plate	MDQL-CR(CG,CB,CW) for 108, 4 pieces/set
MDF-DR10	Diffusion plate for direct-ring lights	MDRL-CR (CG,CB,CW) for 10
MDF-DR16	Diffusion plate for direct-ring lights	MDRL-CR (CG,CB,CW) for 16
MDF-DR28	Diffusion plate for direct-ring lights	MDRL-CR (CG,CB,CW) for 28
MDF-DR31	Diffusion plate for direct-ring lights	MDRL-CR (CG,CB,CW) for 31
MDF-DR50	Diffusion plate for direct-ring lights	MDRL-CR (CG,CB,CW) for 50
MDF-DR56	Diffusion plate for direct-ring lights	MDRL-CR (CG,CB,CW) for 56
MDF-LR25	Diffusion plate for low-angle ring lights	MLRL-CR (CG,CB,CW) for 25
MDF-LR48	Diffusion plate for low-angle ring lights	MLRL-CR (CG,CB,CW) for 48
MDF-LR68	Diffusion plate for low-angle ring lights	MLRL-CR (CG,CB,CW) for 68
MDF-LR100	Diffusion plate for low-angle ring lights	MLRL-CR (CG,CB,CW) for 100
MDF-BR5015	Diffusion plate for bar lights	MBRL-CR (CG,CB,CW) for 5015
MDF-BR7530	Diffusion plate for bar lights	MBRL-CR (CG,CB,CW) for 7530
MDF-BR13015	Diffusion plate for bar lights	MBRL-CR (CG,CB,CW) for 13015

An asterisk (*) in "compatible light models" refers to any LED color (R,G,B or W) of the light.

Polarizing plate:MPL Series

The MPL series polarizing plates are attached to LEDs with Moritex's lenses in order to reduce unwanted glare and reflection during image processing.

Model	Product type	Compatible light models
MPL-DQ108	Square oblique light polarizing plate	MDQL-CR(CG,CB,CW) for 108, 4 pieces/set
MPL-SC56	Simulated coaxial light polarizing plate	MSCL-CR (CG,CB,CW) for 56
MPL-SC74	Simulated coaxial light polarizing plate	MSCL-CR (CG,CB,CW) for 72
MPL-SC105	Simulated coaxial light polarizing plate	MSCL-CR (CG,CB,CW) for 105
MPL-DR10-B	Polarizing plate for direct-ring lights	MDRL-CR (CG,CB,CW) for 10
MPL-DR16-B	Polarizing plate for direct-ring lights	MDRL-CR (CG,CB,CW) for 16
MPL-DR28-B	Polarizing plate for direct-ring lights	MDRL-CR (CG,CB,CW) for 28
MPL-DR31-B	Polarizing plate for direct-ring lights	MDRL-CR (CG,CB,CW) for 31
MPL-DR50-B	Polarizing plate for direct-ring lights	MDRL-CR (CG,CB,CW) for 50
MPL-DR56-B	Polarizing plate for direct-ring lights	MDRL-CR (CG,CB,CW) for 56
MPL-BR5015-B	Polarizing plate for bar lights	MBRL-CR (CG,CB,CW) for 5015
MPL-BR7530-B	Polarizing plate for bar lights	MBRL-CR (CG,CB,CW) for 7530
MPL-BR13015-B	Polarizing plate for bar lights	MBRL-CR (CG,CB,CW) for 13015

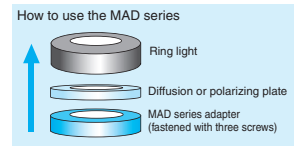
An asterisk (*) in "compatible light models" refers to any LED color (R,G,B or W) of the light.

Adapter : MAD Series

The MAD series is essential when a diffusion or polarizing plate is attached to a ring light.

Model	Product type	Compatible light models
MAD-DR10	Plate attachment adapter for direct-ring lights	MDRL-CR (CG,CB,CW) for 10
MAD-DR16	Plate attachment adapter for direct-ring lights	MDRL-CR (CG,CB,CW) for 16
MAD-DR28	Plate attachment adapter for direct-ring lights	MDRL-CR (CG,CB,CW) for 28
MAD-DR31	Plate attachment adapter for direct-ring lights	MDRL-CR (CG,CB,CW) for 31
MAD-DR50	Plate attachment adapter for direct-ring lights	MDRL-CR (CG,CB,CW) for 50
MAD-DR56	Plate attachment adapter for direct-ring lights	MDRL-CR (CG,CB,CW) for 56

An asterisk (*) in "compatible light models" refers to any LED color (R,G,B or W) of the light.

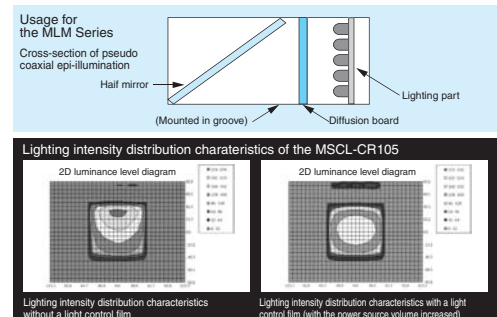


Light control film : MLM Series

The MLM series are resin films that transform diffused light into near-parallel light. Attached to a simulated coaxial light, it makes the light distribution pattern smoother.

Model	Product type	Compatible light models
MLM-SC56	Light control film for simulated coaxial lights	MSCL-CR (CG,CB,CW) for 56
MLM-SC74	Light control film for simulated coaxial lights	MSCL-CR (CG,CB,CW) for 74
MLM-SC105	Light control film for simulated coaxial lights	MSCL-CR (CG,CB,CW) for 105

An asterisk (*) in "compatible light models" refers to any LED color (R,G,B or W) of the light.





Options for bridging lights with lenses

The following optional adapters are designed to be used with Moritex's lenses.

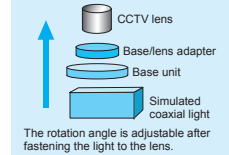
Simulated Coaxial Light/CCTV Lens Adapter: MLA-SC Series

The MLA-SC Series enables small simulated coaxial lights to be mounted at the end of CCTV lenses.

Model	Product type	Compatible light models
MLA-SCBS	Mount base for simulated coaxial lights	MSCL-C*24/39/56
MLA-SCM255	Base/lens adapter for simulated coaxial lights	Filter screw: M25.5P0.5 lens
MLA-SCM270	Base/lens adapter for simulated coaxial lights	Filter screw: M27P0.5 lens
MLA-SCM305	Base/lens adapter for simulated coaxial lights	Filter screw: M30.5P0.5 lens

An asterisk (*) in "compatible light models" refers to any LED color (R,G,B or W) of the light.
*Do not apply any unnecessary load to the lens.

How to use the MLA-SC series



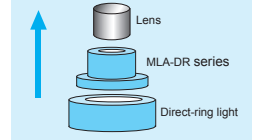
MML/CCTV Lens Adapter

The adapter can be easily used in combination with CCTV lenses.

Model	Product type	Compatible light models
MLA-DR1616	Lens attachment adapter	MDRL-C*16 and R-16 mm lenses
MLA-DR3125	Lens attachment adapter	MDRL-C*31 and R-25 mm lenses
MLA-DR3130	Lens attachment adapter	MDRL-C*31 and R-30 mm lenses
MLA-DR31M255	Lens attachment adapter	MDRL-C*31 and M25.5P0.5 lenses
MLA-DR31M270	Lens attachment adapter	MDRL-C*31 and M27P0.5 lenses
MLA-DR31M305	Lens attachment adapter	MDRL-C*31 and M30.5P0.5 lenses

An asterisk (*) in "compatible light models" refers to any LED color (R,G,B or W) of the light.

How to use the MLA-DR series



Sharp-cut Filter R64 Series

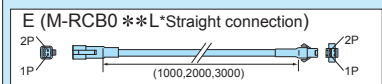
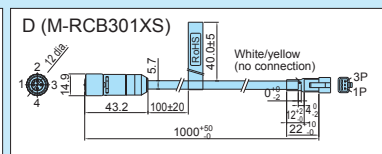
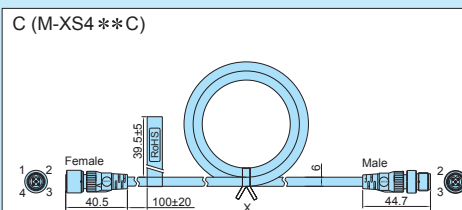
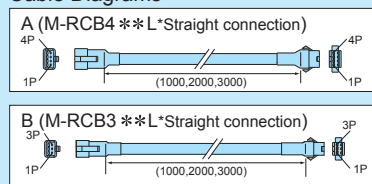
These Filters can be attached to the end of a CCTV lens to prevent light interference when using red light.

Model	Product type	Size
ML-R64-25	Sharp-cut filter for mounting to end of lens	Filter screw: M25.5 P0.5 lenz
ML-R64-27	Sharp-cut filter for mounting to end of lens	Filter screw: M27 P0.5 lenz
ML-R64-30	Sharp-cut filter for mounting to end of lens	Filter screw: M30.5 P0.5 lenz

Cables

Model	Cable Diagram	Product type	Applications	Length
M-RCB401L	A	4-pin type extension cable	•For all lights (except the MCEP series)	1m
M-RCB402L	A	4-pin type extension cable		2m
M-RCB403L	A	4-pin type extension cable		3m
M-RCB301L	B	3-pin type extension cable	•For the MCEP series	1m
M-RCB302L	B	3-pin type extension cable		2m
M-RCB303L	B	3-pin type extension cable		3m
M-XS402C	C	Pin type extension cable	•For the MSPP series	2m
M-XS405C	C	Pin type extension cable		5m
M-XS410C	C	Pin type extension cable		10m
M-RCB301XS	D	Pin type MSPP-MLEP-A070 conversion cable	•For the MSPP series and MLEP-A070	1m
M-RCB001L	E	2-pin type extension cable	•For power sources for built-in fans	1m
M-RCB002L	E	2-pin type extension cable		2m
M-RCB003L	E	2-pin type extension cable		3m
MC-EXC-02	—	Cable for DSUB15 pin external control	—	2m
MC-EXC-07	—	Cable for DSUB15 pin external control	—	—

Cable Diagrams



This document provides information mainly for selecting suitable models. Please read the Instruction Sheet carefully for information that the user must understand and accept before purchase, including information on warranty, limitations of liability, and precautions.

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CSM_8_1_0415

Cat. No. Q164-E1-01

Printed in Japan
0708