



Coaxial Illuminations

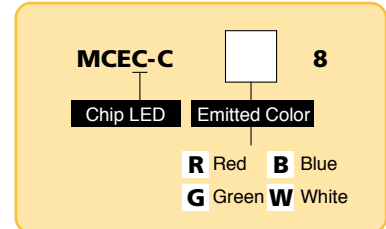
MCEC-C □ 8 Series



Coaxial Illuminations



Explanation of Model Code

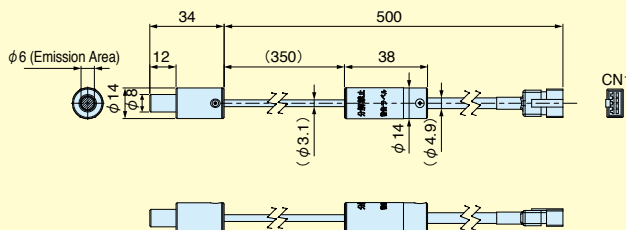


- Medium-powered coaxial spot lights compatible with machine micro lenses (MMLs).
- High brightness (Brighter than MCEL-C*8. Refer to Intensity Characteristic Data on **P.I-24**.)
- Compact and low cost solution
- Uses MLEK power supply (see **P.I-63** and later). Uses our Standard Power Supply Unit (MLEK) which is used with all of our ring and backlight LEDs.

* We have given the highest priority to matching this LED with our telecentric MML lenses with coaxial illumination; use for stand-alone reflective illumination is therefore not suitable.

Model	Emitted Color	Maximum Related Current IFM (A)	External Diameter (mm)	Weight (g)	Product Code
MCEC-CR8	● Red	0.12	φ 8	50	A-2319
MCEC-CG8	● Green	0.15	φ 8	50	A-2320
MCEC-CB8	● Blue	0.15	φ 8	50	A-2321
MCEC-CW8	○ White	0.15	φ 8	50	A-2322

MCEC-C □ 8



Use the MML Series for the optimal matching of spot LED illumination (MCEC Series) and a lens with coaxial illumination.

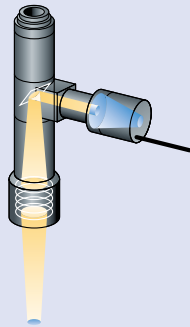
A lineup of 47 types of telecentric optical systems with low image distortion offer a variety of supported number of pixels, magnifications, widths, and camera mounts (only with coaxial incidence function). An unparalleled variety of other illumination and lens products, along with technological know-how, is available to solve any problems that our customers may have.



Example Application of MCEC

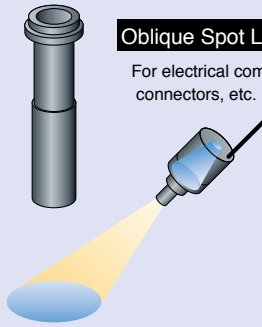
Coaxial Illumination

For wafer, glass panels, etc.

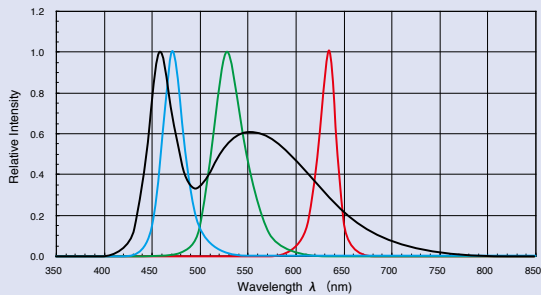


Oblique Spot Lighting

For electrical components, connectors, etc.

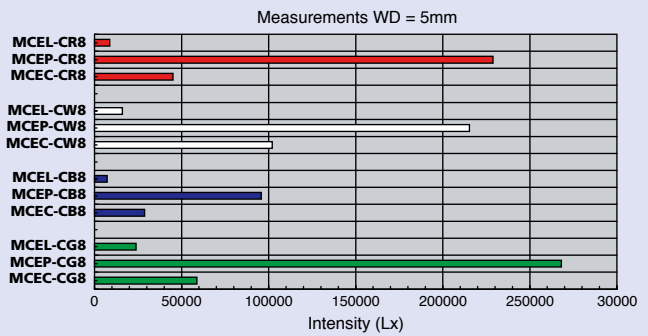


Spectral Characteristic Data



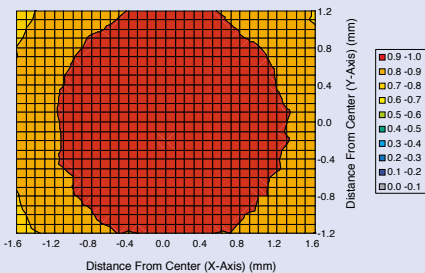
R : Peak Wavelength $\lambda_p = 635.6$ (nm) Dominant Wavelength $\lambda_d = 625.2$ (nm)
 G : Peak Wavelength $\lambda_p = 529.1$ (nm) Dominant Wavelength $\lambda_d = 537.2$ (nm)
 B : Peak Wavelength $\lambda_p = 473.0$ (nm) Dominant Wavelength $\lambda_d = 475.6$ (nm)

Intensity Comparison Data

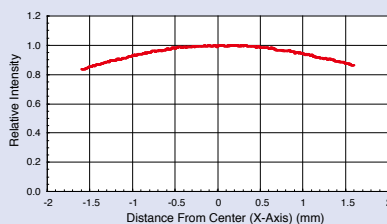


Light Distribution Characteristic

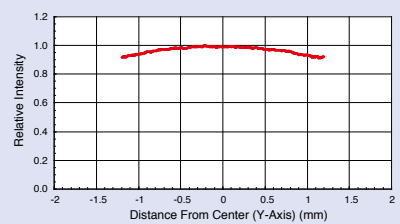
WD=65mm



Light Distribution Qualities for The X-Axis (Horizontal Direction)



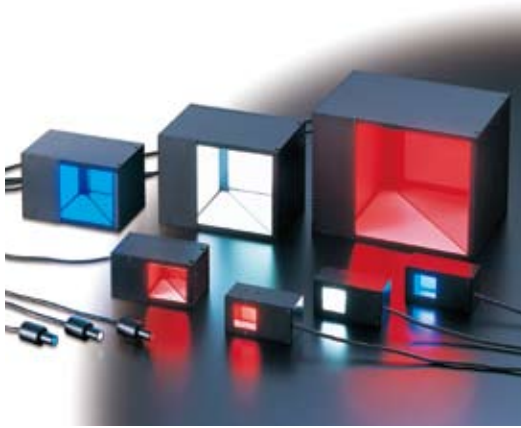
Light Distribution Qualities for The Y-Axis (Vertical Direction)



MCEC-CW8 (When Using MML2-HR65D)

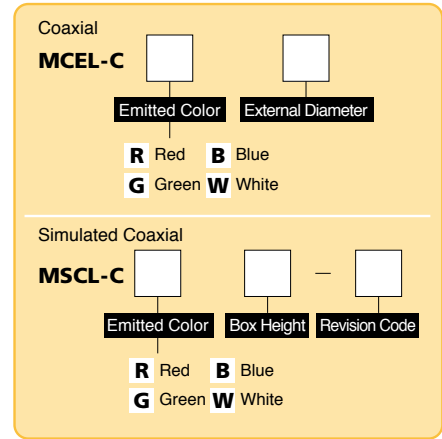


Coaxial illuminations/Simulated Coaxial Illuminations **MCEL/MSCL Series**



Coaxial illuminations/Simulated Coaxial Illuminations

Explanation of Model Code



Power Supply (PI-63)

■ MCEL series

- Compact coaxial illumination designed for the MML series, ideal for objects with highly reflective surfaces

■ MSCL series

- Produces simulated and uniform coaxial illumination for telecentric MML lenses and other lenses without coaxial episcopic illumination

Coaxial Illumination Lineup

Model	Emitted Color	Maximum Related Current IFM (A)	External Diameter At The End (mm)	Weight (g)	Product Code
MCEL-CR8	● Red	0.04	φ8	35	A-2108
MCEL-CG8	● Green	0.03	φ8		A-2142
MCEL-CB8	● Blue	0.03	φ8		A-2110
MCEL-CW8	○ White	0.03	φ8		A-2109

Simulated Coaxial Illumination Lineup

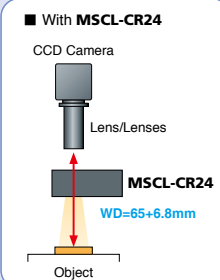
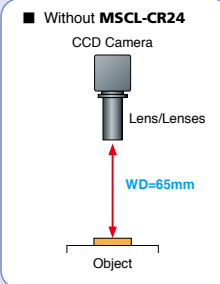
Model	Emitted Color	Maximum Related Current IFM (A)	Box Height (mm)	Optical Path Length Extension (mm)	Weight (g)	Product Code
MSCL-CR24	● Red	0.09	24	6.8	110	A-2099
★ MSCL-CG24	● Green	0.20	24			A-2143
MSCL-CB24	● Blue	0.20	24			A-2101
MSCL-CW24	○ White	0.20	24			A-2100
MSCL-CR39	● Red	0.16	39	1.2	160	A-2093
★ MSCL-CG39	● Green	0.31	39			A-2144
MSCL-CB39	● Blue	0.31	39			A-2095
MSCL-CW39	○ White	0.31	39			A-2094
MSCL-CR56-B	● Red	0.33	56	1.2	320	A-2102
★ MSCL-CG56-B	● Green	0.66	56			A-2145
MSCL-CB56-B	● Blue	0.66	56			A-2104
MSCL-CW56-B	○ White	0.66	56			A-2103
MSCL-CR74-B	● Red	0.62	74	1.2	520	A-2105
★ MSCL-CG74-B	● Green	1.11	74			A-2146
MSCL-CB74-B	● Blue	1.11	74			A-2107
MSCL-CW74-B	○ White	1.11	74			A-2106
MSCL-CR105-B*	● Red	2.14	105	1.2	920	A-2096
★ MSCL-CG105-B*	● Green	2.07	105			A-2147
MSCL-CB105-B*	● Blue	2.07	105			A-2098
MSCL-CW105-B*	○ White	2.07	105			A-2097

★Made-to-order products.

About Installation

Because glass parts are used in the box, the internal optical path length varies. Be aware of extended optical path distance when installing peripheral equipment

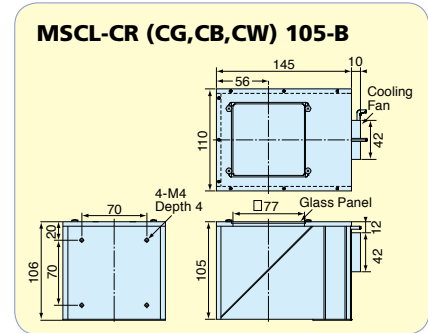
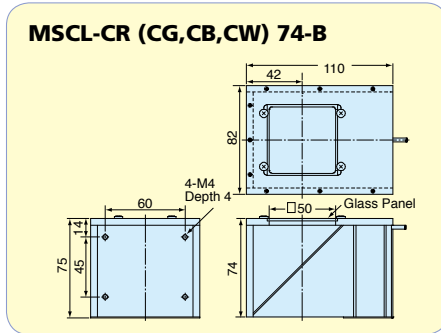
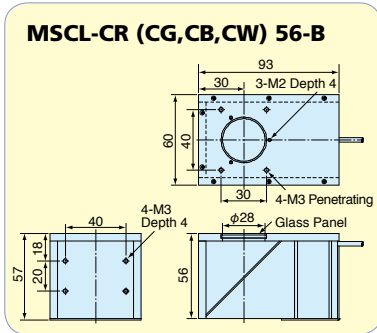
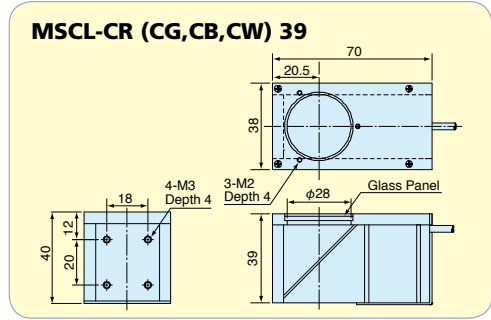
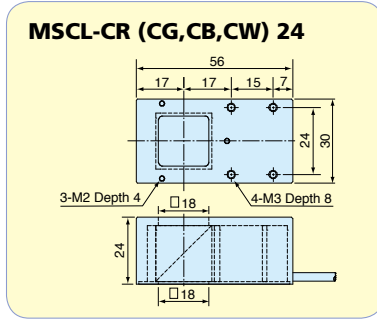
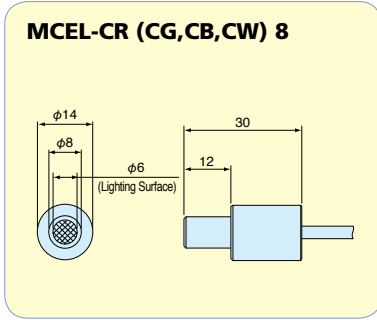
● When using MSCL-CR24 with WD65mm Lenses



Coaxial Illuminations/Simulated Coaxial Illuminations

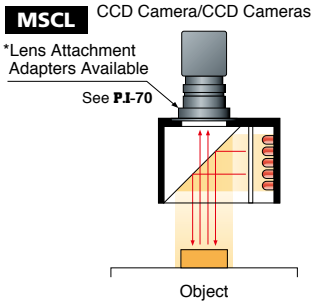
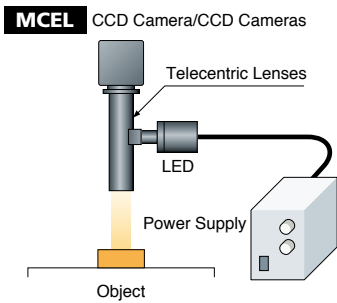


Coaxial Illuminations/Simulated Coaxial Illuminations



MLM Series products on PI-69 can be attached to MSCL-C □□-B products

Illumination Structure



Sample Images

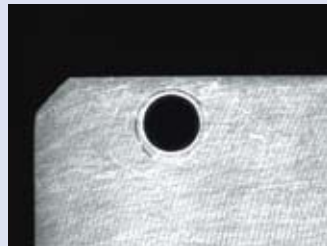
MSCL (Simulated Coaxial Light)



Dry Cell



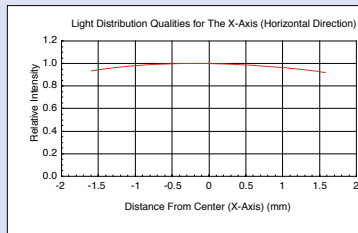
CD (Scratch)



Metal Parts

Light Distribution Characteristic

MCEL-CW8



MSCL-CW56-B

