

Collimated Lighting

Coaxial Lights

MSU Series

Provides light with high parallelism using original lighting technology



Applications Inspection for fine damage on glossy surfaces, character recognition on glossy surfaces, etc.

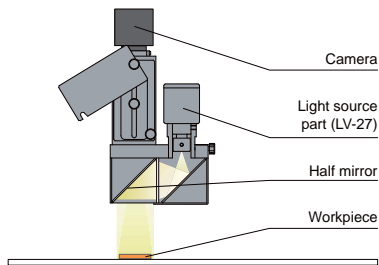
Features

Provides collimated lighting created using a special lens. It is perfect for extracting tiny scratches, damage, or dents on mirror surfaces. The included lens can be used for convergent light.

We accept custom orders. Please feel free to inquire.

- Shape modifications
- Brightness increases
- Changes in wavelength, etc.

Example configuration (MSU-10)



Imaging example: Imaging button cell batteries



Workpiece: Button cell batteries

LED Coaxial Light



With the Coaxial Light, it is possible to reduce surface reflection and form an image of the engraved text.

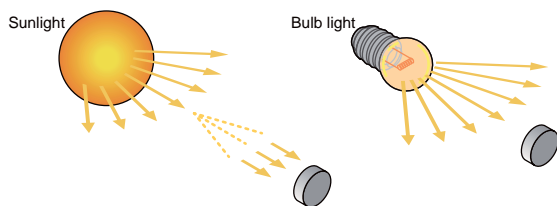
MSU-30X20RD2



Not only is the image of the engraved text more clear than with the Coaxial Light, fine differences in the surface can also be imaged.

Collimated Light Optical Unit MSU Series

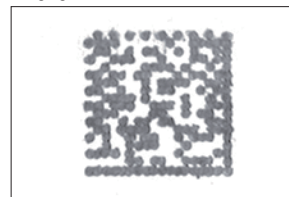
Light illuminated from a normal light source moves in a straight line while radially diffusing. Collimated light refers to light where one point of light illuminated from a source at infinitely far distance, such as the sun, hits any surface from the same angle. The MSU series is an optical unit developed by applying the principle of collimated light.



Extracts Damage, Scratches, and Dents on Mirror Objects

This optical unit is effective for inspections that were difficult using conventional image processing, such as extracting shallow and tiny scratches, damage and dents, and reading barcodes on mirror workpieces.

Imaging of 2-dimensional code



Using an LED Light allows for high performance, stable, and low-cost imaging. This is an applied product that melds lighting technology design with optical design.

For details about the procedure for usage, refer to the material "MSU Series Operating Procedures" on our website. You can download this information from the product website page.

Lineup

Model name	LED color	Power consumption	Peak wavelength / correlated color temperature	Options	Extension cables	Recommended Control Units	Weight
MSU-10RD2	Red	24 V / 0.8 W	630 nm	-	FCB ⁴ Straight Cable FCB-W ⁵ 2-branch Cable FCB-F 4-branch Cable FRCB Robot Cable	PD3 CC-ST-1024 PSB POD ³	275 g
MSU-10SW2	White	24 V / 0.4 W	5,500 K				2,000 g
MSU-10BL2	Blue	24 V / 0.4 W	470 nm				540 g
MSU-30RD2	Red	24 V / 0.8 W	630 nm				9,920 g
MSU-30BL2	Blue	24 V / 0.4 W	470 nm				12,700 g
MSU-30X20RD2 ^{*1}	Red	24 V / 0.8 W	630 nm				13,000 g
MSU-30X20SW2	White	24 V / 0.5 W	5,500 K				
MSU-30X20BL2	Blue	24 V / 0.5 W	470 nm				
MSU-30X20GR2	Green	24 V / 0.5 W	525 nm				
MSU-100RD2	Red	24 V / 0.8 W	630 nm				
MSU-100SW2	White	24 V / 0.4 W	5,500 K				
MSU-130RD2	Red	24 V / 0.8 W	630 nm				
MSU-130SW2-CL	White	24 V / 0.4 W 24 V / 4.6 W	5,500 K				

LED Properties: Spectral Distribution ▶ P.326

Extension Cables ▶ P.308

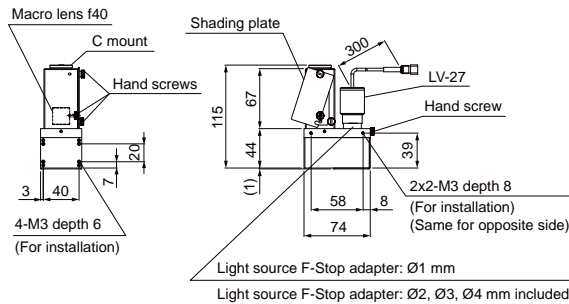
Control Unit Selection Guide ▶ P.251

List of Control Unit Specifications ▶ P.253

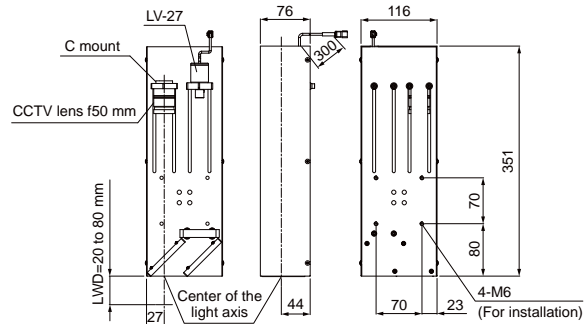
^{*1} This red light cannot be used with the PD3-5024-4-SI or PD3-5024-4-ET Control Unit.
^{*2} The MSU-130SW2-CL is equipped with two Light Units. Use a 2-channel Control Unit.

Dimensions (mm)

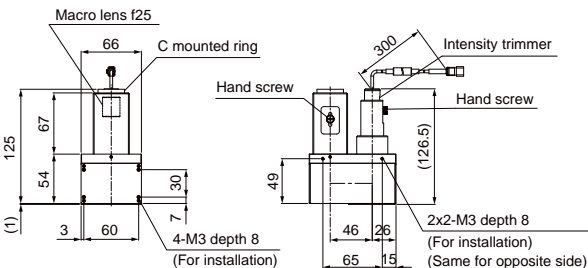
MSU-10RD2/SW2/BL2



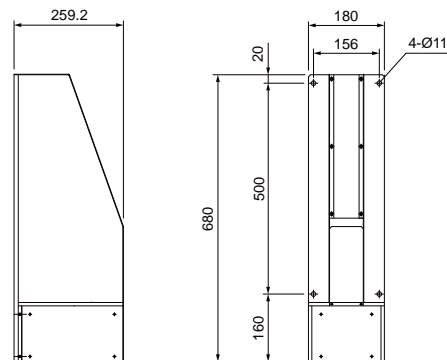
MSU-30RD2/BL2



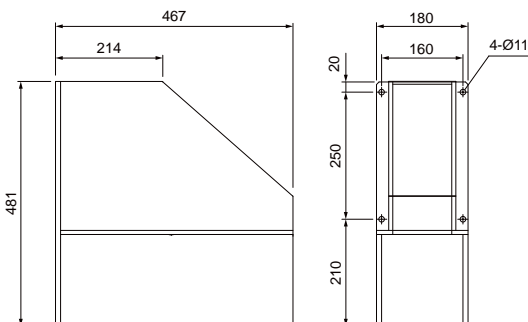
MSU-30X20RD2/SW2/BL2/GR2



MSU-100RD2/SW2



MSU-130RD2/SW2-CL



Reference chart for the field of vision (Estimate)

Using a 1/3 inch sensor camera

Model name	Field of vision	WD
MSU-10	7.5 mm	58 mm
MSU-30	18.7 mm	50 mm
MSU-30X20	15 mm	24 mm
MSU-100	60 mm	50 mm

Regarding reference field of vision
 This is an estimate to help you select a Light Unit, and individual units may vary from the data listed above depending on your imaging conditions.

You can change the connectors of the Light Unit cable. Choose between M12 connectors and flying leads. Refer to P.5 for details.

You can inquire using our website.

- Sample Testing
- Light Unit Selection
- Free Product Trial
- Custom Orders
- Product Details
- Pricing/Quotation
- Discontinued Products

- Direct Lighting
 - LDR2
 - LDR2-LA
 - LDR-LA1
 - SQR
 - SQR-TP
- Diffused Lighting
 - HPR2
 - LFR
 - LKR
 - FPR
 - FPO2
- Direct Lighting
 - LDL2
 - LDLB
 - HLDL2
 - HL
- Diffused Lighting
 - TH2 (5 types)
 - TH
 - LFL
 - HPD2
 - LMD2
 - LAV
 - PDM
 - LFX3
 - LFX3-PT
 - LFV3
- Collimated Lighting
 - MSU
 - MFU
- Stroke Lighting
 - PF
- Water-proof
 - HLDR-IP/
 - HSL-PCL
- Ultraviolet Lighting
 - UV2
 - UV
 - LNSP-UV-FN
- Infrared Control Lighting
 - IR2
 - IU
- Spot Lighting, Etc.
 - HLV3
 - HLV2
 - LV
 - LSP
 - HFS/HFR
 - HLV3-NR
 - HLV2-NR
 - HLV2-3M-RGB-3W
 - HLV3-3M-RGB-4
 - HLV2-3M-RGB-3W
 - PFBR
 - PFB3
 - PFB2
- Convergent Lighting
 - LNLP
 - LNSP2
 - LNSP
 - Coaxial Units
 - LNSP-FN
 - LN/LN-HK
- Diffused Lighting
 - LNSD
 - LND2
 - HLND
 - LT
- Oblique/Angled Lighting
 - LNVP
 - LNDG
 - LNIS2
 - LNIS
 - LNIS-FN
- Lenses
 - Telecentric Lens
 - Macro Lens