Collimated Lighting

Coaxial Lights

MSU Series

Refer to our website for product details.

CCS MSU ▶ Search

Provides light with high parallelism using original lighting technology



MSU-10SW2



MSU-30X20RD2



MSU-30BL2

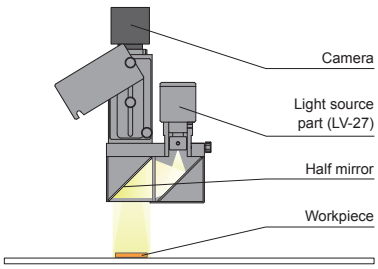
Applications Inspection for fine damage on glossy surfaces, character recognition on glossy surfaces, etc.

Features

Provides collimated lighting created using a special lens. Suitable for extracting minute scratches, dents and depressions on glossy surfaces. The attached lens can be used to condense 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.

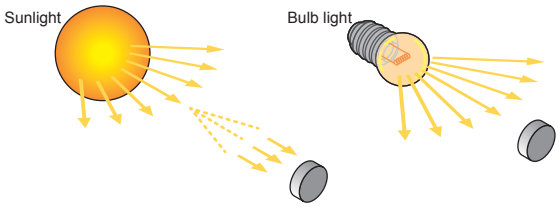
■MSU-30X20RD2



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 emitted from a normal light source moves in a straight line while radially diffusing. Collimated light refers to light where one point of light emitted 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.

Various technical documents available. PDF Drawings | DXF Drawings | Product Brochures | Instruction Guides | 3D CAD | Data Sheets | Imaging Examples | Digital Catalogs

Register to use them.

Ring (Direct): LDR2, LDR2-LA, LDR-LA1, SQR, SQR-TP
Ring (Convergent / Diffused): HLDR3, HPR2, LFR, LKR, FPR
Square: FPQ3
Bar: LDL2, LDLB, HLDL3, LB
Flat: TH2 (5 types), LFL
Dome: HPD2, LDM2, LAV, PDM, LFXV, LFX3, LFX3-PT
Coaxial: LFV3, LFV3-G
Coaxial: MSU, MFU
Strobe: PF
Water-proof: HLDR-IP, HSL-PCL
UV / Violet: UV3/VL3, UV, LNSP-UV3-FN
Infrared: IR2 (Under 1000-nm Type), IR (Over 1000-nm Type), CIR
Reference Light Source: LDF-RLS
Intensity Control: IU
Spot, Etc.: HLV3, LV, HFS/HFR, HLV3-22-4-NR, HLV3-3M-RGB-4, PFBR-600SW2, PFBR-150, SLG-150V-CCS, PFB3(A)
Line (Convergent): LNLP, LNSP2, Coaxial Units, LNSP-FN, LN/LN-HK
Line (Diffused): LNSD, LND2, LT, LNV, LFXV (Rectangular Type), TH2 (Rectangular Type)
Line (Oblique Angled): LNDG, LNIS2, LNIS, LNIS-FN
Lenses: Telecentric Lens, Macro Lens
Other Products: LDF-NB

Lineup

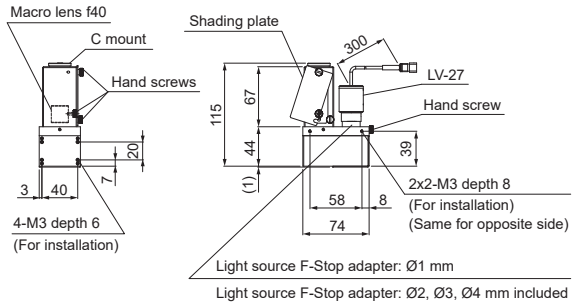
Model Name*1	Input Voltage	Power Consumption RD (Red)	SW (White)	BL (Blue)	GR (Green)	Options	Extension Cables	Recommended Control Units	Weight
MSU-10□□2	24 V	0.8 W	0.4 W	0.4 W	—	—	FCB*3 Straight Cable FCB-W*4 2-Branch Cable FCB-F 4-Branch Cable FRCB Robot Cable *3 The cables with a model name that ends with "-ME7", "-EL2", "-PF", or "-PF-EL9" are not included. *4 The cables with a model name that ends with "-EL2" are not included.	PD4 PD3 CC-ST-1024 POD*2	275 g
MSU-30□□2	24 V	0.8 W	—	0.4 W	—				2,000 g
MSU-30X20□□2	24 V	0.8 W	0.5 W	0.5 W	0.5 W				540 g

LED Properties: Spectral Distribution ▶ P.408 | Extension Cables ▶ P.383 | Control Unit Selection Guide ▶ P.309 | List of Control Unit Specifications ▶ P.311

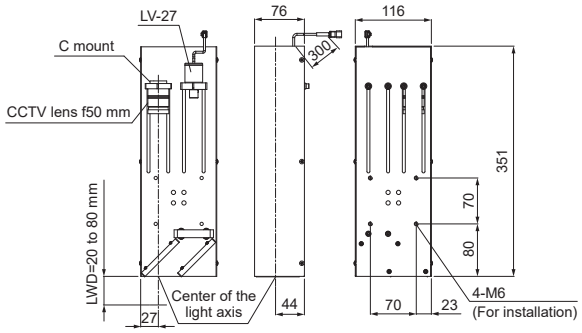
*1 □□ in the model name contains the LED color. (RD: Red, SW: White, BL: Blue, GR: Green)
*2 For information on the combination of light units and POD Series control unit, please refer to our website. https://www.ccs-grp.com/lnk/qr/pod

Dimensions (mm)

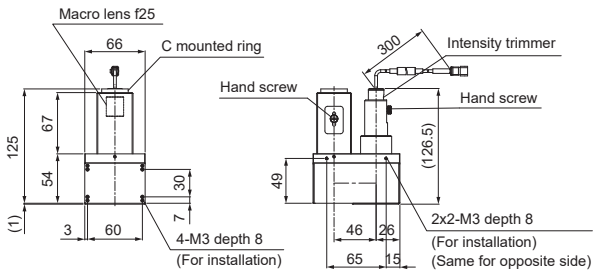
MSU-10RD2/SW2/BL2



MSU-30RD2/BL2



MSU-30X20RD2/SW2/BL2/GR2



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

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.19 for details.