

Provides light with high parallelism using original lighting technology



Applications Dimension measuring, dimension measuring of cylindrical objects, inspection for fine burrs, etc.

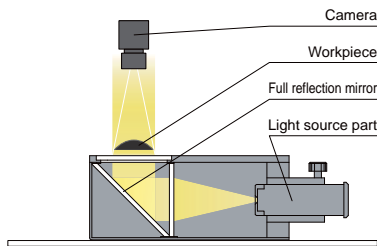
Features

We achieved collimated lighting through unique lighting technology. It allows for highly-accurate imaging that prevents light from wrapping around the workpiece. It allows for convergence to match the imaging-side lens in use.

We accept custom orders. Please feel free to inquire.

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

Example configuration (MFU-34x30)



Imaging example: Imaging the appearance of screws

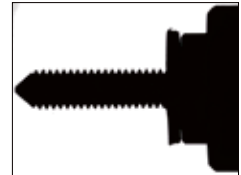


LED Flat Light



With a Flat Light, the illuminated light wraps around the workpieces, making it difficult to emphasize the edges.

MFU-34X30-BL

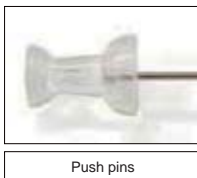


It prevents the illuminated light from wrapping around, allowing for the edges to be emphasized.

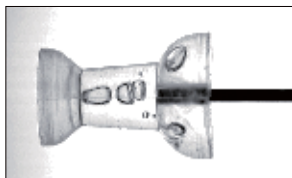
Comparison of Imaging with a Flat Light and Collimated Light

Imaging example: Imaging the appearance of push pins

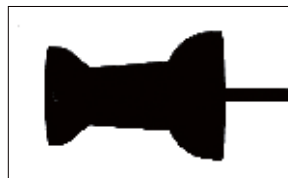
Workpiece image



LED Flat Light



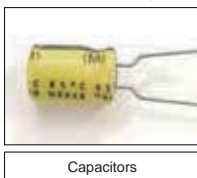
MFU-34X30-BL



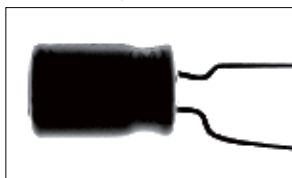
When the user looks at a clear resin push pin with diffused light from a Flat Light illuminated from the rear, the clear part appears clear. However, with collimated light, the light is refracted by the clear resin, and the whole pin appears black.

Imaging example: Imaging the appearance and dimensions of capacitors

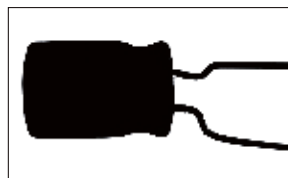
Workpiece image



LED Flat Light



MFU-34X30-BL



If you view it with diffused light of Flat Light illuminated from the rear, the light wraps around the side of the capacitor body. However, with collimated light, that wrap around is prevented and the thickness of the wires is also imaged evenly.

Lineup

Model name	LED color	Power consumption	Peak wavelength	Options	Extension cables	Recommended Control Units	Weight
MFU-34X30-BL	Blue	12 V / 0.3 W	470 nm	-	CB Straight Cable CB-W 2-branch Cable CB-F 4-branch Cable RCB Robot Cable	PD2* PSB* PTU2*	185 g
MFU-54X40-BL	Blue	12 V / 0.3 W	470 nm				350 g

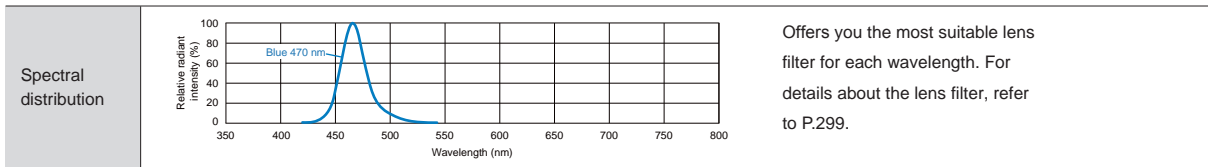
* Because the MFU series is for 12 V input, please select a Control Unit with a 12 V output.

Extension Cables ▶ P.308

Control Unit Selection Guide ▶ P.251

List of Control Unit Specifications ▶ P.253

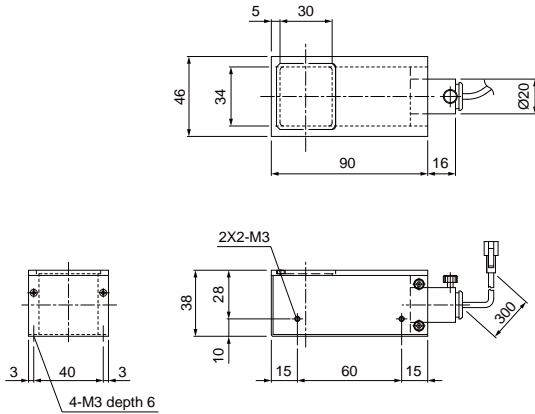
LED Properties



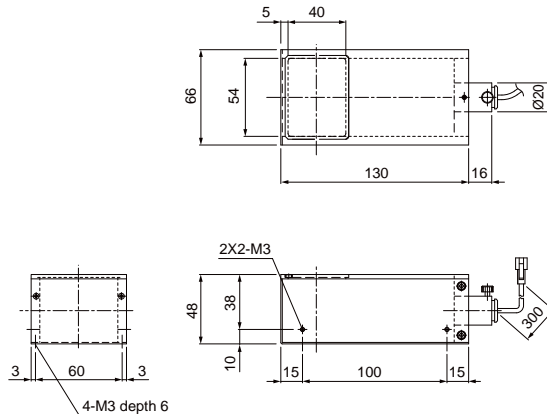
Be sure to read the "Instruction Guide" included with the product before use and follow the safety precautions upon use. The data included is for reference only. Actual values may vary.

Dimensions (mm)

MFU-34X30-BL



MFU-54X40-BL



Regarding the Procedure for Usage

- 1) Set the item to be inspected and determine the imaging range.
- 2) Set this product and determine the distance between the lens and the camera (LWD).
- 3) Align this product's light axis with the center of the imaging field of vision.
- 4) Adjust intensity.

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

- Direct Lighting
 - LDR2
 - LDR2-LA
 - LDR-LA1
 - SQR
 - SQR-TP
- Diffused Lighting
 - HPR2
 - LFR
 - LKR
 - FPR
 - FPQ2
- Direct Lighting
 - LDL2
 - LDLB
 - HLDL2
 - HL
- Diffused Lighting
 - TH2 (5 types)
 - TH
 - LFL
 - HPD2
 - LDM2
 - LAV
 - PDM
 - LFX3
 - LFX3-PT
 - LFV3
- Collimated Lighting
 - MSU
 - MFU
- Strobe Lighting
 - PF
- Water-proof
 - HLDL-IP/
 - HSL-PCL
- UV
 - UV2
 - UV
 - LNSP-UV-FN
- Infrared
 - IR2
- Control Units
 - IU
- Spot Lighting, Etc.
 - HLV3
 - HLV2
 - LV
 - LSP
 - HFS/HFR
 - HLV3-NR
 - HLV3-3M-RGB-4
 - HLV2-NR
 - 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
 - LNV
- Oblique/Angled Lighting
 - LNDG
 - LNS2
 - LNIS
 - LNIS-FN
- Lenses
 - Telecentric Lens
 - Macro Lens