High-brightness Lighting Box 《LLBG Series》 Options

LLBG Filter Changer

Light source box with a filter changer

Model	LLBG1-ZAF2 (Old Model : LLBG1-ZAF)
Recommended bundle diameter	φ3～20mm
Outer dimensions W×D×H [mm]	145×270×195
Lighting system	Constant-current control
Number of outputs	1ch
Input power	100 VAC to 240 VAC (±10%)
Power consumption	160W(typ)
LED service life	Min. 30,000 hours※1
Applicable fiber	Glass fiber
Cooling system	Fan cooling Front intake and rear exhaust (one internal fan and one rear fan)
LED emission color	White
Color filter	Up to 6 filters can be attached.
External interface	Parallel/RS-232C/LAN ports (standard equipment)
Mass	Approx. 4.8 kg
Environmental control	Conforming to RoHS2

※1 Estimated value based on range from initial light intensity to 70% (This value is not guaranteed.)
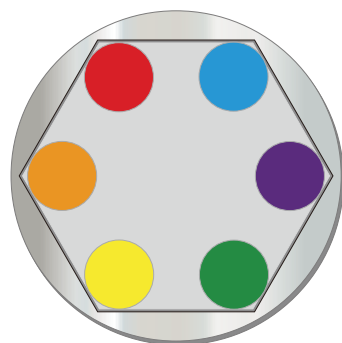
RoHS2 COMPLIANT | LAN | RS-232C | Fan cooling | Customizable | Emission color

Features

- This filter changer can be installed on a high-power light source box exceeding a 250 W metal halide light source.
- Up to 6 color filters can be attached.
- External interface: Parallel/RS-232C/LAN ports (standard equipment)
- Proprietary cooling mechanism ensures stable light output.
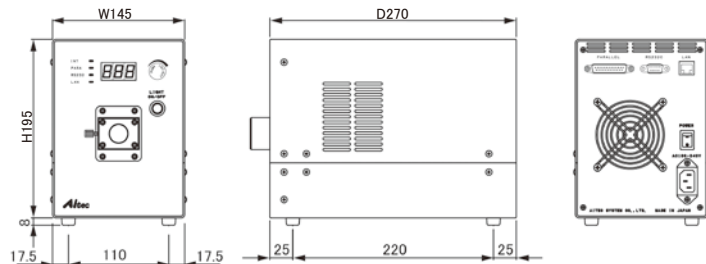- Mounting adapter selectable according to light guide used.

Up to 6 color filters can be attached.
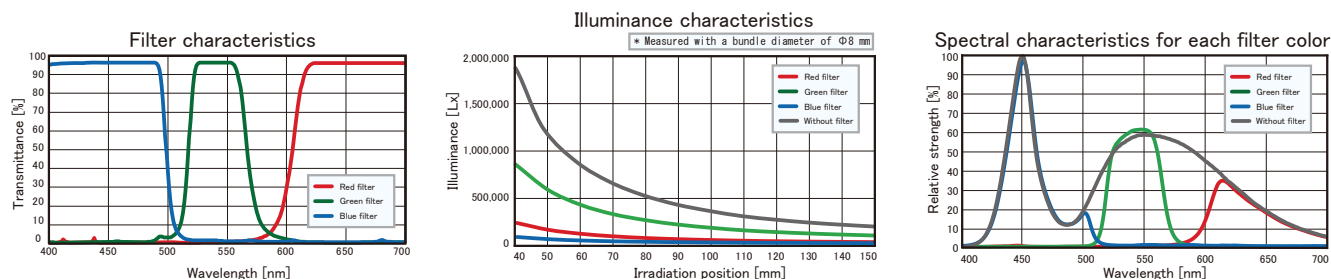
Application example

Light source for various light guides, light source for transmission light

Light source for line camera, light source for area camera

Light source for visual inspection, light source for image processing

Outer dimensions

* Product specifications are subject to change without notice.

Data (Typical example)

Filter characteristics / Illuminance characteristics / Spectral characteristics for each filter color

* Graph information (for reference only) does not guarantee product quality.
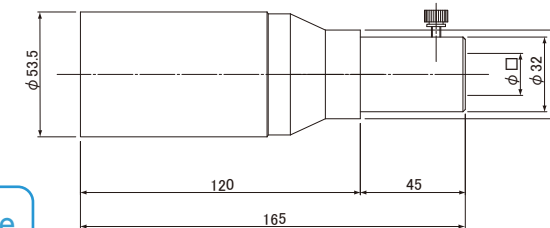
ALU54-□ Condensing Lens Unit

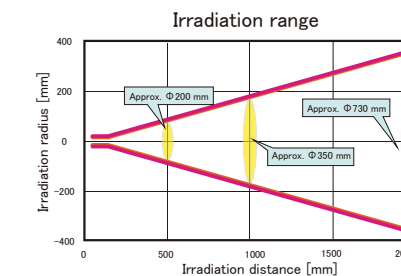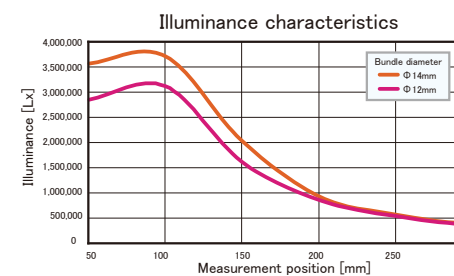**RoHS2 COMPLIANT** Customizable

Outer dimensions

* Product specifications are subject to change without notice.

Use and features

- Condenser lens dedicated to large bundle diameters
- Supports bundle diameters Φ12 mm to 20 mm
- Attaching this unit to a lighting box allows for increased/more uniform illuminance on the irradiation surface
- Contact us about the mounting diameter on the condenser lens side. (Outer dimensions: □)
- This unit is used for various purposes such as image processing and visual inspection.

Data (Typical example : ALU54-18, LLBG1-BA)

Illuminance characteristics / Irradiation range

* Graph information (for reference only) does not guarantee product quality.

Light Guide (Optical Fiber)

RoHS2 COMPLIANT Customizable

Use and features

- Attaching this light guide to a lighting box allows for various lighting applications.
- Various fiber materials (including plastic and glass) available
- Custom-orderable light guide for specific applications. Various uses, such as inspection

Elements of model

GL □①②③④ - □⑤⑥ - □⑦ - □⑧⑨

Model examples: GLP8IE-1S-1M-YR

① Plastic fiber ② Bundle diameter Φ8 mm ③ Fixed tube ④ Insertion part Φ15 mm x 37 mm ⑤ 1-branch fiber ⑥ Straight bracket ⑦ Fiber length 1 m ⑧ Fiber exit size Φ12 mm x 20 mm ⑨ End shape: Circle

① Material	② Bundle diameter	③ Exterior tube	④ Light guide insertion part	⑤ Branch	⑥ Shape of incident-side bracket	⑦ Length	⑧ Fiber exit size	⑨ Fiber end shape
P: Plastic	3:Φ3	I: Fixed type	Blank: Dedicated type	1: 1-branch fiber	S: Straight	1M:1m	U: Φ25 mm x 40 mm (bundle diameter Φ20 mm)	R: Ring
G: Multi-component glass	4:Φ4	F: Flexible type	A: Φ25 mm x 40 mm (for bundle Φ20 mm diameter) fiber insertion part outer diameter Φ25 mm x insertion length 40 mm	2: 2-branch fiber	R: Right angle	R5M:0.5m	V: Φ18mm x 40mm (bundle diameter Φ14 mm)	L: Linear
Q: Quartz	5:Φ5		E: Φ15 mm x 37 mm (MORITEX) fiber insertion part outer diameter Φ15 mm x insertion length 37 mm	4: 4-branch fiber			W: Φ14 mm x 40mm (bundle diameter Φ8 to 12)	No symbol: Straight spot
	6:Φ6		F: Φ15 x 31 (NIPPON P.I, NISSEI ELECTRIC, Kenko Tokina, HOYA) fiber insertion part outer diameter Φ15 mm x insertion length 31 mm	4C: 4 set fiber			X: Φ5 mm x 30 mm (bundle diameter Φ3 mm)	
	8:Φ8		G: Φ15 x 21 (MITSUBISHI RAYON) fiber insertion part outer diameter Φ15 mm x insertion length 21 mm				Y: Φ12 mm x 20 mm (bundle diameter Φ4 mm to 6 mm)	
	10:Φ10		H: Φ15 x 20 (HAYASHI WATCH-WORKS) fiber insertion part outer diameter Φ15 mm x insertion length 20 mm				Z:Φ8x12	
	11.3:Φ11.3		I: Φ20 x 15 (for bundle Φ14 diameter) fiber insertion part outer diameter Φ20 x insertion length 15 mm					
	12:Φ12		J: Φ13 x 15 (SUMITA OPTICAL GLASS) fiber insertion part outer diameter Φ13 x insertion length 15 mm					
	14:Φ14		S: Φ15 mm x 15 mm (standard) fiber insertion part outer diameter Φ15 mm x insertion length 15 mm					
	20:Φ20							