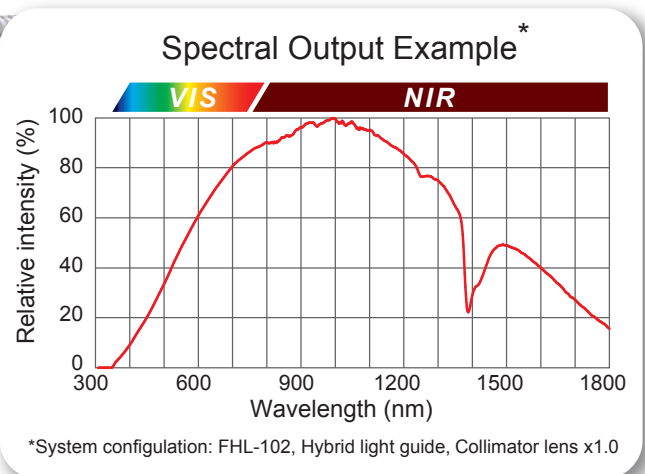# Halogen Light Source 100W
FHL-102

High Stability Halogen Illuminator

Features

- NIR output
- Light control by the variable slit
- Compact design
- High stability
- Flexible illumination by light guide
- RS-485 remote control

Applications

- Inspection illuminator
  Semiconductor/Agricultural crops/Foods
- Microscope
- Photoreaction
- Bioscience
- Spectrometry
- Bias light for spectral sensitivity
  measurement

FHL-102
Halogen
Light Source

SHUTTER

LIGHT CONTROL

⚠ Caution
Do not look at
the light directly

POWER

ASAHI SPECTRA

Spectral Output Example*

VIS   NIR

Relative intensity (%)

Wavelength (nm)

*System configulation: FHL-102, Hybrid light guide, Collimator lens x1.0
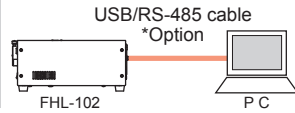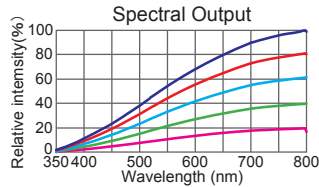
Features

■Shutter Function

■Light Control Function

The light intensity is mechanically controlled by the variable slit. There is no change in color temperature.

Spectral Output

Relative intensity(%) vs Wavelength (nm)

■RS-485 Remote Control

The FHL-102 can be controlled remotely by using USB/RS-485 cable.
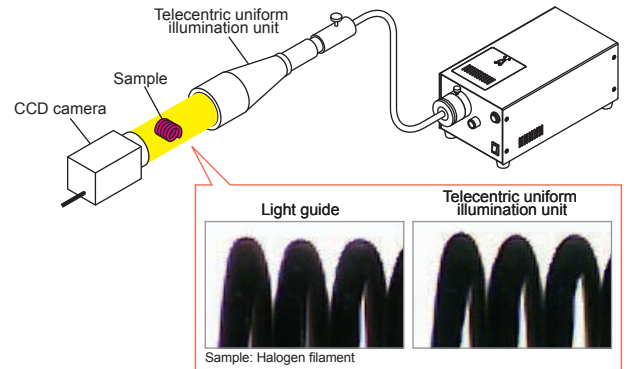You can control several units by daisy chain connection.

Remote Control Example
- Lamp ON/OFF
- Shutter function Open/Close
- Lamp status monitor

USB/RS-485 cable *Option

FHL-102 → PC

Usage Example

Telecentric Backlight Illumination

You can reflect the sample silhouette sharply by using the telecentric uniform illumination unit as the backlight illuminator.

Telecentric uniform illumination unit

Sample

CCD camera

| Light guide | Telecentric uniform illumination unit |

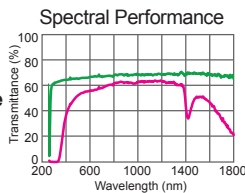Sample: Halogen filament

Options

Light Guide

The output light from the FHL-102 is delivered to a desired direction by the light guide.
We also offer a multi-branch light guide for custom.

■ Hybrid Light Guide
Length(L):1m, 2m
Fiber bundle: 5mm dia.
Numerical aperture: 0.57

■ Low OH Light Guide
Length(L):1m, 2m
Fiber bundle: 5mm dia.
Numerical aperture: 0.22

Spectral Performance
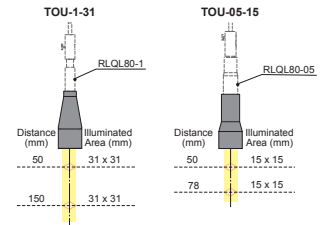
Transmittance (%) vs Wavelength (nm)

Collimator Lens

Each collimator lens is designed to provide the uniform illumination by using with the light guide.

x 0.5
Size : 43mm dia. x 245mm
Substrate : Fused silica

Distance (mm)	Illuminated area(mm)
100	12x12
200	26x26
500	68x68

x 1.0
Size : 28mm dia. x 192mm
Substrate : Fused silica

Distance (mm)	Illuminated area(mm)
100	23x23
200	43x43
500	105x105
1000	209x209

x 2.0
Size : 55mm dia. x 217mm
Substrate : Fused silica

Distance (mm)	Illuminated area(mm)
100	56x56
200	86x86
500	175x175
1000	325x325

Telecentric Uniform Illumination Unit

The telecentric uniform illumination unit achieves a parallel illumination by connecting to a collimator lens.

TOU-1-31
RLQL80-1

Distance (mm)	Illuminated Area (mm)
50	31 x 31
150	31 x 31

TOU-05-15
RLQL80-05

Distance (mm)	Illuminated Area (mm)
50	15 x 15
78	15 x 15

Line Light Guide

The line light guide delivers light with the line shape.

Ring Light Guide

The ring light guide achieves a shadowless uniform illumination by illuminating from all directions.

Filter Holder

An optical filter can be mounted inside the unit with the filter holder.
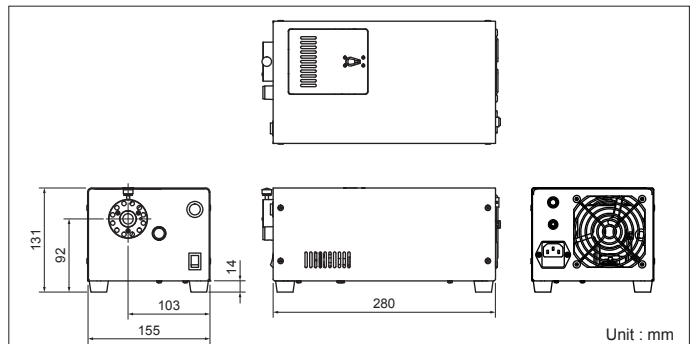*Size: 50x50mm / Thickness: less than 6mm

General Specifications

Model: FHL-102
Output wavelength: from VIS to NIR
Input voltage: AC100 - 240V 50/60Hz
(Input range: AC90 - 264V)
Apparent power: Less than 170VA
Lamp type: Reflector halogen lamp 100W 12V100W (AL)
Lamp voltage, current: 12V100W(DC) *Representative value
Lamp life: 1000h (Average) *Not guaranteed
Cooling method: Forced air cooling
Functions: Shutter Open/Close: Solenoidal drive
Light intensity control: Variable slit
Control method: Built-in controller
Remote control: RS-485
Safety mechanism: Cooling fan problem, Lamp status monitor (RS-485)
Recommended environment: Temperature 10 - 35 deg C
Humidity 20 - 80% *Avoid condensation
Dimensions: 155(W) x 280(D) x 131(H)mm
Weight: 3.4kg

⚠ **Warning** Do not touch the light guide adapter during the operation or immediately after turning off the lamp because it remains hot.

Package Contents

- FHL-102 main unit
- Halogen 100W with reflector
- Heatsink
- AC cable (3m)
- Instruction manual

Dimensions

131
92
14
103
155
280

Unit : mm

*Product specifications are subject to change without notice.

ASAHI SPECTRA