# Graviton's Optical Coupler : GC series

Optics are designed in-house



## GC-3420

NA.0.34⇔NA.0.20

## GC-10A20

Light receiving diameter
Φ10 ⇔ NA. 0.20

## GC-8A50

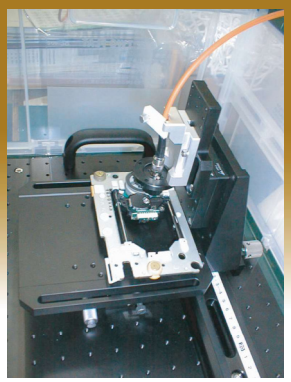
Light receiving diameter
Φ8⇔NA. 0.50

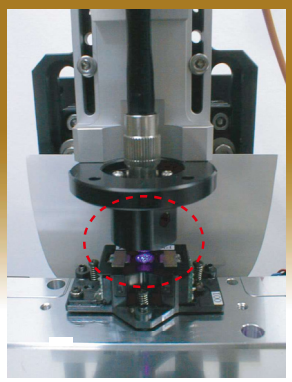
We recommend to use with Graviton's O/E converters.

### ■GC-3420

Graviton's in-house developed GC-3420 is a condensing coupler to observe the emitted light from the optical pickup with high numerical aperture.

Recommended fiber :
400um core diameter, Step Index fiber with FC connector





Optical Pickup provided by Digital Stream

### ■GC-10A20

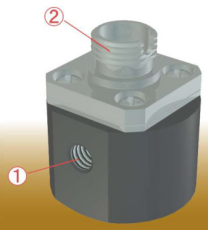
GC-10A20 collects a ray of beam emitted from a flat panel display into a fiber cable efficiently.
To observe the collected light, Graviton's SPS series O/E converters are available.

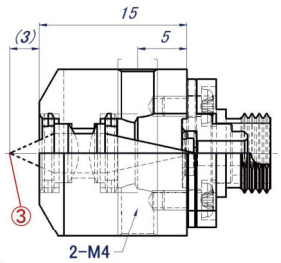

The holder for the filter comes with GC-10A20.

Filter is optional.
As to the size of the holder, see p.3. Contact us for details.

## How to mount GC-3420

1. To mount GC-3420 to the desired place, use M4 screws to the tapped hole ① . Note the screws should not be inserted deeper than 4mm of the tapped hole.
2. Connect one end of a fiber cable to the FC connector(②), and the other end of the fiber cable to an O/E converter.
3. Settin a light source at the position shown ③, then transmit the light signal to GC-3420.



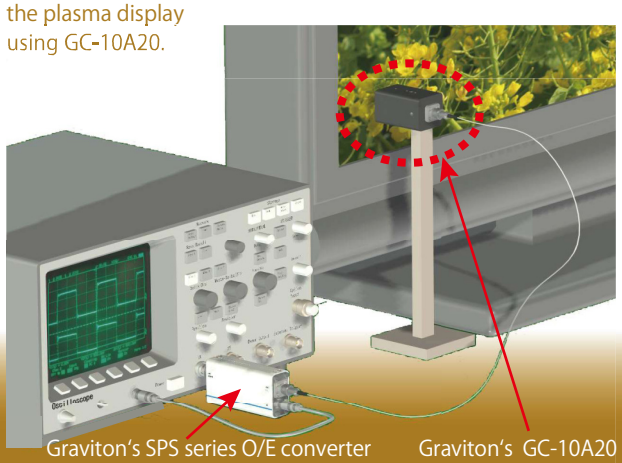




Dimensions

## GC-10A20

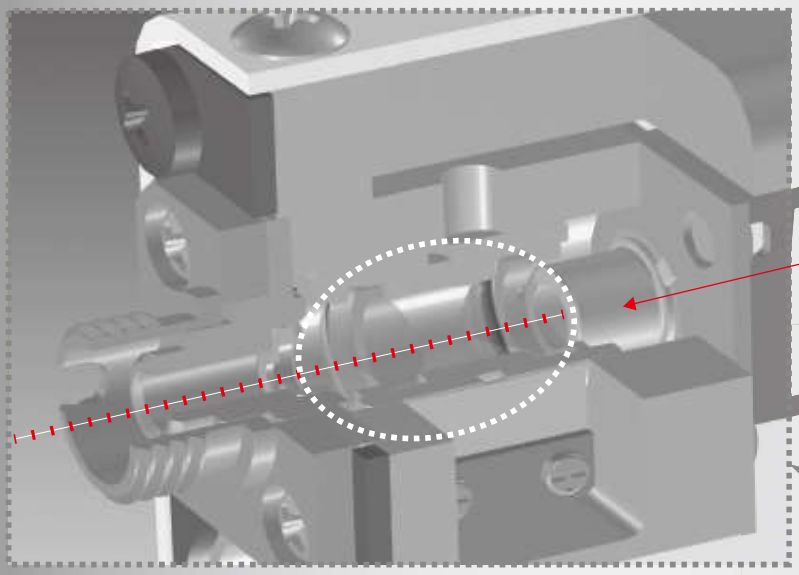
### Application example

The image shows the observation of the weak excited light from the plasma display using GC-10A20.




Graviton

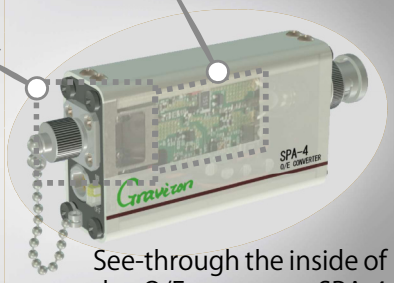
# Collecting a ray of light efficiently



Optics are designed in-house.

PD: Photo Diode

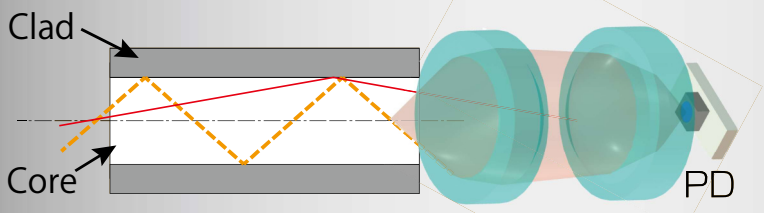
+ Low noise and wide bandwidth high performance amplifier circuit




See-through the inside of the O/E converter SPA-4

## Graviton's O/E converters

The optical system, which is designed to collect almost all modes, enables the PD to convert to high quality electrical signal with low noise.
In case under the same condition with the same light source above, without Graviton's optical system, only the limited modes are received by a PD.



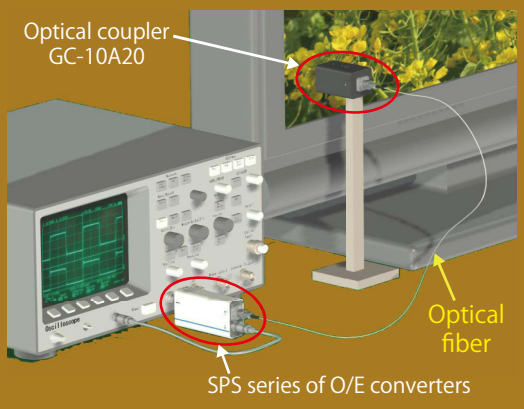

See the image that the Multimode fiber

**Optics are designed in-house**

**GI POF**, high speed POF & large core diameter POF can be observed.

**Wide range** DC to 3GHz for visible to IR wavelength (SPA-4 : 300V/W@850nm)

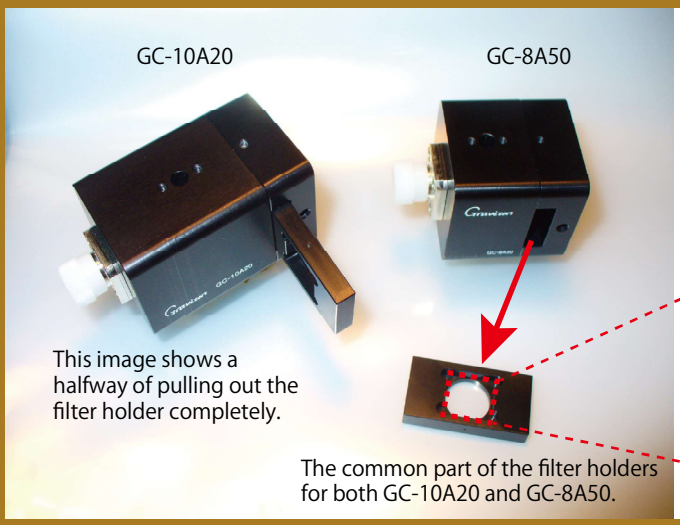
**High sensitivity** model from 10KV/W to 2MV/W




This image shows an example to observe the weak excited light from the plasma display panel.

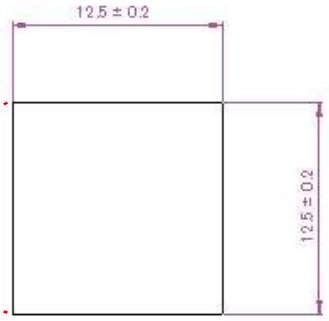
SPS series of O/E converters with high sensitivity for long wavelength features a large numerical aperture as well as 20,000V/W sensitivity.
Max core: 0.5mm
Max NA: 0.25

# Available filter size for GC-xxA series




Recommended filter dimensions

□12.5±0.2mm

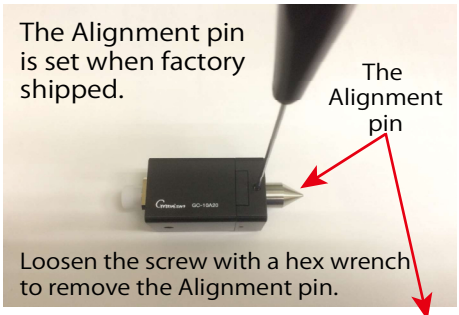



Thickness:
less than 2.0mm

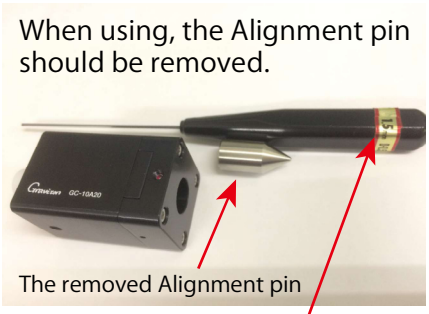

## The Alignment pin

Note the tip of the Alignment pin is to be the spot position or the light emission point.

Assuming the tip of the Alignment Pin (φ8, φ10) which comes with GC series as a theoretical position of light source, it is useful to align the incident light.

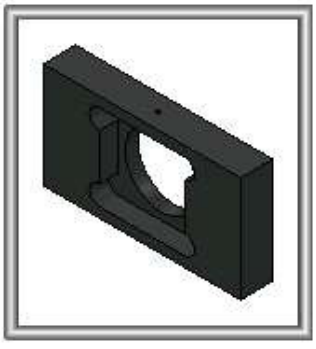



( This pin is an accessory )



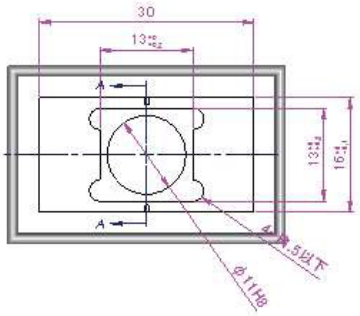

Hex wrench size: 1.5mm
( This wrench is not included )

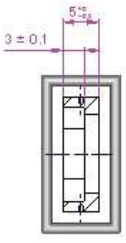
## Filter holder for GC-xxA series



Filter holder 3D

Filter holder dimensions




Cross section A-A



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