

**■Features**

- Optical component for polarization control of terahertz wave
- Fresnel rhomb wave plate with co-axial design for input and output terahertz beams
- Broadband (typical value: 0.5 THz to 2.5 THz)

**■Applications**

- Terahertz wave phase control
- Terahertz polarization imaging
- THz-STM (scanning tunneling microscope)



Left: A16394-02 Right: A16394-04

**■Outline**

This is a Fresnel rhomb wave plate for controlling terahertz wave polarization. The adoption of Fresnel rhomb makes it possible to handle a terahertz wave over a broad band. In addition, stacking total reflection prisms simultaneously achieves a large aperture and a small size of the component. The prisms are made of high-resistivity silicon, which highly transmits a terahertz wave.

**■Specification**

Parameter	A16394-02	A16394-04	Unit
Retardation	$\lambda/2$	$\lambda/4$	—
Material	Silicon		—
Effective aperture	$\phi 20$		mm
Dimensions (D × L)	50.8 × 50	50.8 × 31	mm

Figure 1: Polarization control with total reflection prism (example)

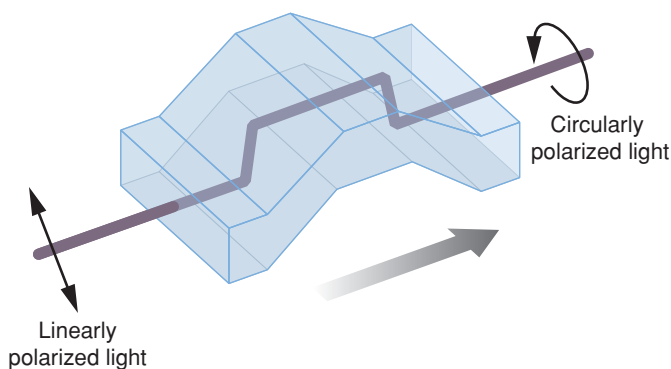
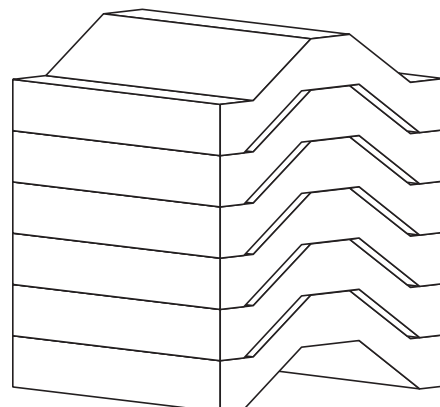


Figure 2: Stacked wave plates

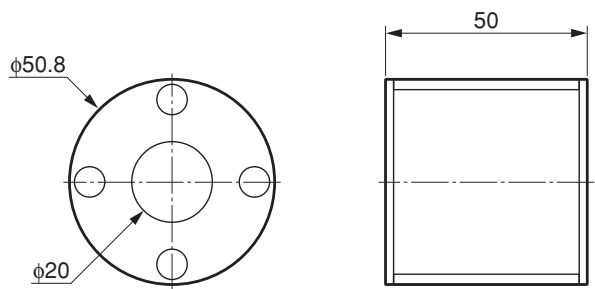


\* Stacked plates are fixed by holder.

# Terahertz Wave Plate A16394-02/-04

Figure 3: Dimensions (unit: mm)

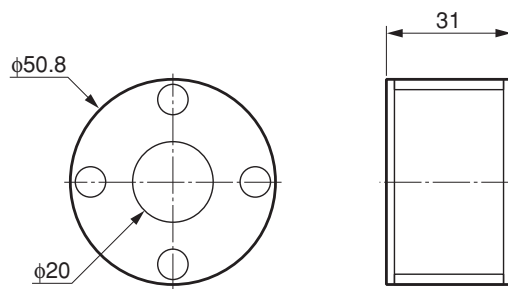
●A16394-02



\* Tolerances are  $\pm 0.25$  mm.

LEI-F10006

●A16394-04



\* Tolerances are  $\pm 0.25$  mm.

LEI-F10007

●Information described in this material current as of August 2021. Specifications are subject to change without notice.

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