



Paraboloid mirror is a curved mirror that converts diverging light from a point of light source into parallel light.

By making the paraboloid a curved surface, it is possible to retrieve parallel light more efficiently than a spherical concave mirror. An example use of paraboloid mirror is as a lamp reflector of a microscope.

- It obtains high performance condensing by precision aspheric surface processing.
- It can provide long-term stability because it has a protective scratch-resistant coating over aluminum.
- It is easy to position the light source at the focusing point because there is a hole on the axis of the paraboloid.
- By entering the thick parallel light, it allows the light to be collected at one point.



**Specifications**

Material	Tempax®
Coating	Al + SiO <sub>2</sub>

Tempax® is a registered trademark of SCHOTT AG company.

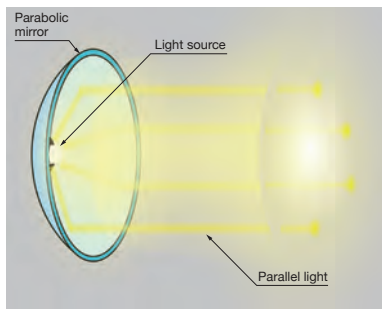
**Guide**

- ▶ Different focal length, outer diameter and hole sizes not mentioned on-line or in our catalog are available as a custom product upon request.
- ▶ Also available for ellipsoidal TCEA mirror for focusing light of the lamp at one point. [Reference](#) B036

**Attention**

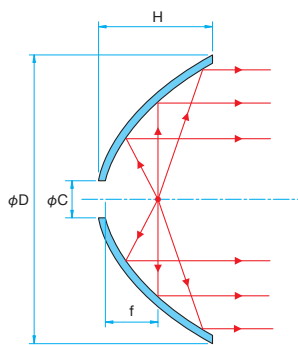
- ▶ Light does not reach to the mirror surface when high directivity source is placed at focal point, so it is not available to get the effect of paraboloid mirror.
- ▶ Light near the optical axis center is not reflected by the hole in the mirror, there is a case that intensity distribution of the parallel light becomes ring-shaped.
- ▶ When focusing the light emitted from a parabolic mirror by a lens, it does not focused at one point by the influence of light incident on the lens directly from the lamp.

**Schematic**



**Outline Drawing**

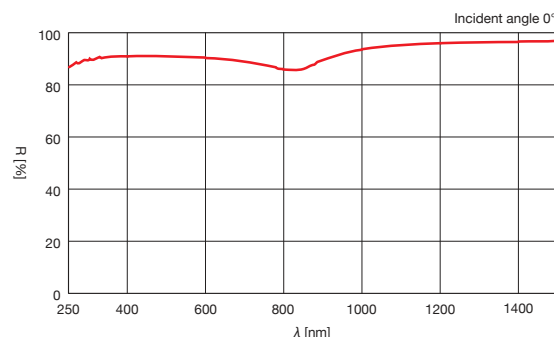
(in mm)



- Tolerance
- Diameter  $\phi D_{\pm 0.5}$
- Hole diameter  $\phi C_{\pm 0.5}$
- Focal length  $\pm 1\%$

**Typical Reflectance Data**

R: Reflectance



**Specifications**

Part Number	Dimension $\phi D$ [mm]	Focal length $f$ [mm]	Thickness* $H$ [mm]	Hole dimension $\phi C$ [mm]
TCPA-100C-12.5-SH18	$\phi 100$	12.5	46	$\phi 18$
TCPA-105C-15-SH23	$\phi 105$	15	42	$\phi 23$
TCPA-152C-17-SH30	$\phi 152$	17	76.5	$\phi 30$
TCPA-152C-30-SH35	$\phi 152$	30	44.5	$\phi 35$

\* The thickness "H" is design value and there is a possibility of individual variability in the actual product. It is Not guaranteed value.

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