

CASCADE LASER CORPORATION

Beam Probes for CO₂ and other molecular lasers

Product Information



Figure 1: CO₂ Laser Beam Probes

The CO₂ Laser Beam Probes are hand-held plates designed to simplify the alignment of IR optical systems. They display the laser beam as a dark image on a fluorescent background using the same UV-excited, thermal-sensitive surfaces developed for Cascade Laser's Thermal Image Plates.

The small size of the Beam Probes permits them to be placed close to optical parts and accurately show the position of a laser beam relative to an aperture. Tasks such as determining when a CO₂ laser beam is striking the center of a mirror or entering the aperture of a power meter are simplified with the use of the Beam Probes.

Description

Cascade Lasers' Model 23-S consists of seven Beam Probes and one hard plastic case. Each Beam Probe covers a different sensitivity range which extends from 200 w/cm² to 0.05 w/cm². The five Beam Probes correspond to surfaces #1,2,3,4,5,7 and 8 described in Cascade Lasers' Thermal Image Plate Data Sheet.

Each Beam Probe is 1/8" thick, 1-1/2" wide, and 6" long. The end of each probe is tapered to 1/32" thickness so that the thermal-sensitive surface can be brought close to optical parts.

Operation of the Beam Probes requires the use of a UV lamp such as Cascade Lasers' Model 22-UV to illuminate the surface. Although any long-wave ultraviolet lamp can be used, Model 22-UV offers small size, high illumination level, and the ability to stand on end.

Power Dissipation

The Beam Probes are designed primarily to be used with medium and low-power laser beams. The thinness of the plates, while allowing accurate positioning, does limit the heat dissipation of this model. The maximum allowable power is 50 watts for intermittent duty. When used with laser beam powers between 50 watts and 10 watts, the plates should be allowed to cool after absorbing 700 watt seconds of energy. The Beam Probes can be used indefinitely with beam powers of 7 watts or less.

Ordering Information

Model 23-S CO₂ Laser Beam Probe Set; Weight: 3lbs.
(includes 7 Beam Probes with hard plastic case)

Individual Beam Probes:

Model 23-1 (60-200 w/cm²)

Model 23-2 (30-100 w/cm²)

Model 23-3 (15-50 w/cm²)

Model 23-4 (7.5-25 w/cm²)

Model 23-5 (2.5-11 w/cm²)

Model 23-7 (0.4-3.2 w/cm²)

Model 23-8 (0.06-0.4 w/cm²)

Model 22-UV, Ultraviolet Lamp; Weight: 2lbs.



Figure 1: *Beam Probe*

Contact Cascade Laser Corporation for ordering information or to request a quotation on any of these products.

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Beam Probes
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