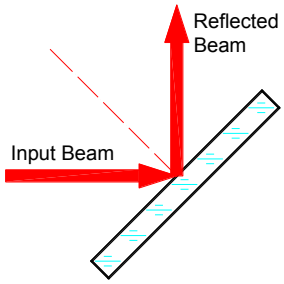
Mirror

- Mirror & Reflector

Total Reflectors are used either within a laser cavity as rear mirrors or folding mirrors, or external to the laser as bending mirrors to deliver the beam to the work.

Specifications	
Diameter Tolerance	+0,-0.13mm
Thickness Tolerance	±0.25mm
Clear Aperture	>80%
Flatness	λ/4@632.8nm
Parallelism	< 3 arc minutes
Surface Quality	40/20 scratch and dig
Coating:	HR coating, 45AOI



Total reflector for CO2 laser (Wavelength 10.6um)

Silicon total reflector is the most common used mirror for CO2 laser system, it has good durability, thermal stability and relatively low cost.
Copper mirror is typically used for high-power CO2 laser system, it has high thermal conductivity.
Molybdenum mirror is normally polished only, without coating, used for tough environments. it has extremely tough surface.

Part No.	Material	Diameter (mm)	Thickness (mm)	Side 1 Radius	Side 1 Reflectivity (%R)
RSI-0.75-3	Silicon	19.1	3.0	Plano	>99.2
RSI-1-3	Silicon	25.4	3.0	Plano	>99.2
RSI-1.5-4	Silicon	38.1	4.0	Plano	>99.2
RSI-1.5-9.6	Silicon	38.1	9.7	Plano	>99.2
RSI-2-5	Silicon	50.8	5.1	Plano	>99.2
RSI-2-9.5	Silicon	50.8	9.5	Plano	>99.2
RCU-0.5-3	Copper	12.7	3.0	Plano	>99.5
RCU-1.1-6	Copper	27.9	6.0	Plano	>99.5
RCU-38-6	Copper	38.0	6.0	Plano	>99.5
15RCU-38-6	Copper	38.0	6.0	15MCC	>99.5
RCU-10.6-50-9	Copper	50.0	9.0	Plano	>99.5
RCU-50-25	Copper	50.0	25.0	Plano	>99.5
RCU-50-25-WC	Copper	50.0	25.0	Plano(Water Cool)	>99.5
RCU-2-54	Copper	50.8	54.0	Plano	>99.5
RCU-4.25-38.1	Copper	108.0	38.1	Plano	>99.5
RMO-0.75-3	Mo Mirror	19.1	3.0	Polished	>97
RMO-0.75-3-2MCC	Mo Mirror	19.1	3.0	2MCC polished	>97
RMO-1-3	Mo Mirror	25.4	3.0	polished	>97
RMO-1.1-6	Mo Mirror	27.9	6.0	polished	>97
RMO-2-0.276	Mo Mirror	50.8	7.0	Polished	>97

Total Reflector for Nd:YAG Laser (wavelength 1064nm)

Part No.	Diameter (mm)	Thickness (mm)	AOI
RBK-19-3	19.0	3.0	45°
RBK-25-3	25.0	3.0	45°
RBK-1-9.5	25.4	9.5	45°
RBK-30-5	30.0	5.0	45°
RBK-1.5-4	38.1	4.0	45°
RBK-1.5-6.35	38.1	6.4	45°
RBK-50-5	50.0	5.0	45°
RBK-2-6.3	50.8	6.3	45°
RBK-2-9.5	50.8	9.5	45°
RBK-9×11×1	9.0x11.0	1.0	45°
RBK-5.2×11.5×1	5.2×11.5	1.0	45°

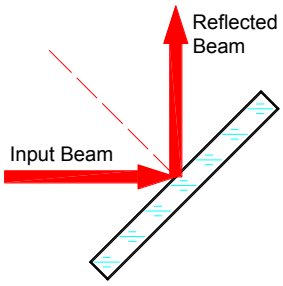
Total Reflector for 1064/650/532nm

Part No.	Diameter (mm)	Thickness (mm)	Side 1 Reflectivity (%R)
RBK-19-3-YGR	19.0	3.0	>99.5%@1064nm >99.2%@532nm >90%@650nm, 45° AOI
RBK-25-3-YGR	25.0	3.0	

Total Reflector for Green Laser (wavelength 532nm)

Part No.	Diameter (mm)	Thickness (mm)	AOI
RBK-19-3G	19.0	3.0	45°
RBK-25-3G	25.0	3.0	45°
RBK-30-5G	30.0	5.0	45°
RBK-1.5-4G	38.1	4.0	45°
RBK-50-5G	50.0	5.0	45°
RBK-2-6.3G	50.8	6.3	45°

Specifications	
Diameter Tolerance	+0,-0.2mm
Thickness Tolerance	±0.2mm
Clear Aperture	>80%
Flatness	λ/4@632.8nm
Parallelism	< 3 arc minute
Surface Quality	20/10 Coating:
Coating:	HR coating, 45AOI



Total Reflector for UV Laser (wavelength 355nm)

Part No.	Diameter (mm)	Thickness (mm)	AOI
RBK-19-3U	19.0	3.0	45°
RBK-25-3U	25.0	3.0	45°
RBK-30-5U	30.0	5.0	45°
RBK-1.5-4U	38.1	4.0	45°
RBK-50-5U	50.0	5.0	45°
RBK-2-6.3U	50.8	6.3	45°

Total Reflector for UV Laser (wavelength 266nm)

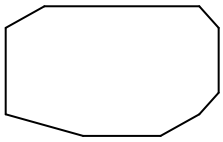
Part No.	Diameter (mm)	Thickness (mm)	AOI
RBK-19-3V	19.0	3.0	45°
RBK-25-3V	25.0	3.0	45°
RBK-30-5V	30.0	5.0	45°
RBK-1.5-4V	38.1	4.0	45°
RBK-50-5V	50.0	5.0	45°
RBK-2-6.3V	50.8	6.3	45°

- Scanning Mirror

The scanning mirrors are light weight rectangular mirrors that used for high speed two-axis laser scanning system. The dimensions for each mirror have been calculated accordingly with the laser beam size. The mirror has high reflectivity of 99.5% or above. The scanning mirror usually mounted on to a galvanometer for scanning purposes. For two axis scan mirror, commonly the Y mirror has a bigger size compared with the X mirror. This is due to the fact that the X mirror is used to scan the Y mirror rather than the object directly.

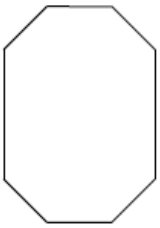
- Surface figure: λ/4 @633nm per 1"Dia
- Scratch/Dig: 40/20,
- Reflective coating:
  - Silicon, Gold or Silver coating for CO2 Laser (10.6um)
  - Si/BK7/FS, Dielectric or Silver coating for Nd:YAG Laser (1064nm/650nm/532nm)
  - Si/BK7/FS, Dielectric coating for Green & Visible Laser (650nm/355nm)
  - Mounted scanning mirror are available upon request.
  - Wavelength: 10.6um/1064nm/532nm/355nm

UNMOUNTED SCANNING MIRRORS



ASSYMETRIC MIRROR

X-MIRROR



Y-MIRROR

Part No.	Dimension L x W x T (mm)	Substrate	Beam Size	X/Y
SCM-8.4x11.5x1.05	8.4x11.5x1.05	Si/BK7/FS	5	X1
SCM-10.1x15.1x1.05	10.1x15.1x1.05	Si/BK7/FS	8	Y1
SCM-10.6x25.4x1.7	10.6x25.4x1.7	Si/BK7/FS	8	X2
SCM-12.6x15x1.7	12.6x15x1.7	Si/BK7/FS	8	Y2
SCM-13.69x20.32x1.5	13.69x20.32x1.5	Si/BK7/FS	10	X3
SCM-17.78x24.43x1.5	17.78x24.43x1.5	Si/BK7/FS	12	Y3
SCM-13.7x20.3x2	13.7x20.3x2	Si/BK7/FS	10	X4
SCM-17.7x24.4x2	17.7x24.4x2	Si/BK7/FS	12	Y4
SCM-14.7x19.4x1.7	14.7x19.4x1.7	Si/BK7/FS	10	X5
SCM-16.4x28x1.7	16.4x28x1.7	Si/BK7/FS	10	Y5

Part No.	Dimension L x W x T (mm)	Substrate	Beam Size	X/Y
SCM-15.7x20.2x2.5	15.7x20.2x2.5	Si/BK7/FS	12	X6
SCM-17.7x31.5x2.5	17.7x31.5x2.5	Si/BK7/FS	12	Y6
SCM-16x21x2	16x21x2	Si/BK7/FS	10	X7
SCM-19x32x2	19x32x2	Si/BK7/FS	12	Y7
SCM-17.2x22.5x1.2	17.2x22.5x1.2	Si/BK7/FS	12	X8
SCM-18.85x30.5x2.4	18.85x30.5x2.4	Si/BK7/FS	12	Y8
SCM-18.3x24.6x3.2	18.3x24.6x3.2	Si/BK7/FS	12	X9
SCM-21.3x38.9x3.2	21.3x38.9x3.2	Si/BK7/FS	12	Y9
SCM-19x29x2	19x29x2	Si/BK7/FS	12	X10
SCM-23x34x2	23x34x2	Si/BK7/FS	15	Y10
SCM-20x25x2	20x25x2	Si/BK7/FS	12	X11/Y14
SCM-23x30x2	23x30x2	Si/BK7/FS	15	Y11
SCM-25x30x2	25x30x2	Si/BK7/FS	20	X14
SCM-22.1x28.8x3.2	22.1x28.8x3.2	Si/BK7/FS	15	X12
SCM-24.8x39.4x3.2	24.8x39.4x3.2	Si/BK7/FS	15	Y12
SCM-24x37x4	24x37x4	Si/BK7/FS	15	X13
SCM-30x42x4	30x42x4	Si/BK7/FS	20	Y13
SCM-25x35x2	25x35x2	Si/BK7/FS	15	X15/X16/X17
SCM-30x35x2	30x35x2	Si/BK7/FS	20	Y15
SCM-35x45x2	35x45x2	Si/BK7/FS	25	Y16/X20
SCM-32x39x2	32x39x2	Si/BK7/FS	20	Y17
SCM-25x38x2	25x38x2	Si/BK7/FS	15	-
SCM-27x32x2	27x32x2	Si/BK7/FS	20	X18
SCM-21x30x2	21x30x2	Si/BK7/FS	15	Y18
SCM-34x55x4	34x55x4	Si/BK7/FS	25	X19
SCM-43x63x4	43x63x4	Si/BK7/FS	30	Y19
SCM-42x65x2	42x65x2	Si/BK7/FS	30	Y20
SCM-40.1x54.9x4	40.1x54.9x4	Si/BK7/FS	30	X21
SCM-46.7x70.1x4	46.7x70.1x4	Si/BK7/FS	30Y	Y21
SCM-45x35x2	35x45x2	Si/BK7/FS	30	-
SCM-40x64x5	40x64x5	Si/BK7/FS	30	X22
SCM-47x76x5	47x76x5	Si/BK7/FS	30	Y22
SCM-45x70x4	45x70x(1.5-4)	Si/BK7/FS	30	X23
SCM-60x80x4	60x80x(1.5-4)	Si/BK7/FS	40	Y23