

EOPC-SC-10

The SC-10 type scanners are low cost, compact size components especially suited for high volume OEM and custom industrial applications.

The fixed frequency resonant optical scanner is an electromagnetically driven moving mirror device, which deflects a light beam with a sinusoidal motion. The mirror assembly is attached at the center of a spring. The scanning frequency range of the SC-20 type scanner is from 10 Hz to 1.5 kHz, fixed at any one value within the range. The scan angle is inversely proportional to the frequency, and is a function of the mirror size.

High device "Q" insures frequency stability, low reaction forces and low electrical drive power. High flexural stiffness provides good resistance to shock and vibration, as well as low wobble and good scan repeatability. Resonating at the natural frequency makes the device an excellent candidate for long life operation for a multitude of applications that require good imaging with minimal distortion.

The scanners can easily be incorporated in small size and portable instruments. Glass mirrors are standard. Metal mirrors, gratings, lenses or other optical attachments are available as special order. Also available are mirrors for UV-IR-VIS applications.

The scanners require only minimal power. Since they are components that have no wearing parts, they provide excellent repeatability and long life. The scanners are used in varying applications including:

- Surface and quality inspection
 - Barcode scanners
- Pattern forming and recognition
 - Biomedical imaging
 - Non-impact printing

Operation at resonant frequency is sustained by a feedback amplifier type [ED driver](#) or the [AGC driver](#), using the scanner as a frequency source. The [AGC driver](#) also provides a higher amplitude stability (0.01%) and a position output signal. The [PLD-1S driver](#) will phase lock the scanner to an external clock signal. The [PLD-2S driver](#) will phase lock two scanners as a "master/slave" scanning system and the [PLD-2SXY driver](#) will phase lock two scanners as an "X-Y" scanning system.

Special configurations and elements other than mirrors (e.g.: gratings, prisms, lenses etc.) are available as a special order. Drive electronics with different packaging, regulation and power supply options are available.

For large volume OEM manufacturing we would consider providing free information to build your driver, incorporate it within your drive electronics or build it to your desired size.

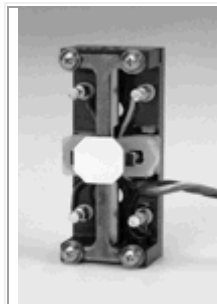
Special pricing for OEM applications.

SC-10 RESONANT OPTICAL SCANNER:

ONE FIXED FREQUENCY from the range of 100Hz to 1500Hz

The following should serve as guidelines only:

FREQ. (Hz)	SCAN ANGLE (P-P DEG OPT)	MIRROR SIZE (mm)
100-139	60°	20×20
140-249	50°	10×10
250-399	40°	10×10
400-599	30°	10×10
600-799	24°	8×8
800-999	20°	8×8
1000-1249	15°	8×8
1250-1500	10°	7×7



Laser Support Services

SC-10-HF HIGH FREQUENCY RESONANT OPTICAL SCANNER:

ONE FIXED FREQUENCY from the range of 1600Hz to 3000Hz

The following should serve as guidelines only:

FREQ. (Hz)	SCAN ANGLE (P-P DEGOPT)	MIRROR SIZE (mm)
1600	40°	6mm dia or 6x6 mm
2200	30°	6mm dia or 6x6 mm
3000	25°	6mm dia or 6x6 mm