

LEYSOP LTD

Manufacturers and suppliers of electro-optic components

Compact OEM Pockels Cells



Longitudinal electric field
KD*P design

Dry or fluid filled

High power handling

High extinction ratio

>1000:1

Low optical loss

Standard \varnothing 35mm package

Electro-Optic Q-switches continue to find applications where very fast switching times are required and recent advances in solid state switching circuits now make the electro-optic Q-switch a more effective solution for high performance Q-switch pulsed laser systems. The miniaturization of these devices has also generated renewed interest in their use.

Leysop produce a miniature KD*P longitudinal mode Pockels cell for integration into compact laser heads without compromising on the excellent performance of the larger units. The diameter of the package conforms to the industry standard 35mm which conveniently fits with large numbers of readily available commercial kinematic mounts.

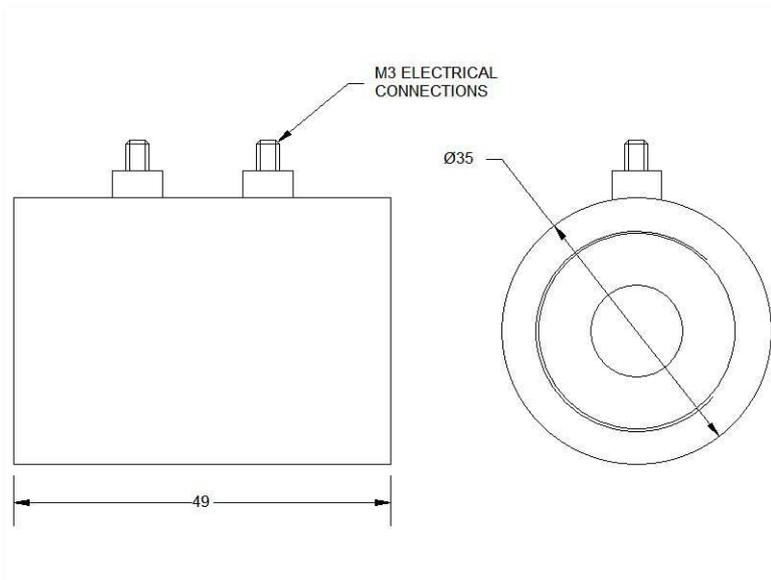
The package body is made from a high

performance polymer material with black anodized end rings. Electrical connections are made using either 1mm Cambion pins or by means of 4mm stud terminals (as shown above) and either form can be supplied as preferred. For reasons of electrical safety and also shielding of radiated emissions we do not recommend this type of cell for use outside of a suitable enclosure.

Both fluorocarbon fluid filled and dry cells can be supplied for operation with all the common visible to Near IR laser wavelengths.

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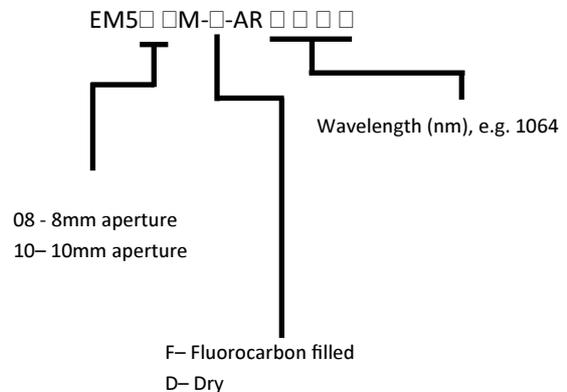
The longitudinal KD*P Pockels cell has been the mainstay of electro-optic Q-switching for many years for good reason. It provides very high extinction (>1000:1) with larger apertures than are practical using alternative transverse field devices. The switching voltages required however are higher than for transverse field devices as there is no advantage to be obtained from increasing the crystal length. Devices can be used in either half wave or quarter wave switching modes for lower operating voltage.

Product Specifications

Product Specification	EM500M
Aperture	8, 10, 12, 15, 20mm
Wavelength range	0.3-1.2µm
Approximate Halfwave voltage (DC, 1064nm)	6.2kV
Approximate Halfwave voltage (AC, 1064nm)	7.5kV
Maximum voltage	10.0kV
Optical rise time	<1.0ns
Contrast (extinction ratio) @ 1064nm	>1000:1
Capacitance un-terminated	~5-8pF
Damage threshold (1064nm, 10ns pulse)	~600MW/cm ²
Insertion loss	<2% (dry cell)
Physical dimensions	35mm diameter EM508M-512M: 49mm long EM515M: 51mm long EM520M: 66mm long

Specifying the Compact Pockels Cell Q-switch:

The Q-switch is available as standard with either 8mm or 10mm aperture in both fluid filled (immersion) or dry type. Units may be supplied with windows either broadband (BBAR) coated or single wavelength (VEE) coated. The model code is thus:



Specifications for guidance only, subject to modification without notice.