# TIETSOP ISTD

Manufacturers and suppliers of electro-optic components

### Low Voltage Electro-Optic Light Modulators



Transverse field design

Low voltage operation

Wide transmission range

2 or 4mm apertures

ADP, KD\*P, LiNbO<sub>3</sub> Crystal versions available

Driver available (M250)

#### EM 200A / EM400A

This is a very low voltage ADP transverse modulator designed to operate at all wavelengths in the visible and is entirely free from piezo-electric stability beyond that obtained by the ADP type. Its resonances. This modulator has a high degree of temperature stability, but where long term d.c. amplitude is required it should be operated in a stable temperature environment. The modulation frequency is not limited by the device characteristics other than by its electrical capacitance and therefore depends on the drive circuit used. Wide band ar-coatings are used on all components.

#### EM 200K / EM400K

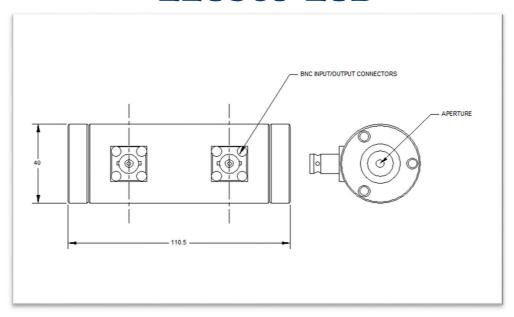
This is a low voltage transverse KD\*P electro-optic modulator designed to give maximum thermal transmission range is extended into the infra-red and its extinction ratio is also better than that obtained from its ADP counterpart. It does however display piezo-electric characteristics.

#### EM 200L / EM400L

This is a low voltage transverse electro-optic modulator using high damage threshold lithium niobate. It has similar characteristics to the EM 200K with an optical range extended further into the infra-red.

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## **LEYSOP LTD**



## **Product Specifications**

| Model No.                                | EM200A     | EM400A     | EM200K      | EM400K      | EM200L    | EM400L    |
|--|------------|------------|-------------|-------------|-----------|-----------|
| Crystal type                             | ADP        | ADP        | KD*P        | KD*P        | LiNb0₃    | LiNb0₃    |
| Aperture                                 | 2.0mm      | 2.0mm      | 2.0mm       | 2.0mm       | 2.0mm     | 2.0mm     |
| Crystal Length                           | 4 x20mm    | 4 x20mm    | 2x40mm      | 2x40mm      | 2 x 36mm  | 2 x 36mm  |
| Half Wave<br>Voltage at<br>633nm         | 220V       | 370V       | 220V        | 370V        | 220V      | 440V      |
| Crystal<br>Orientation                   | 45°y-cut   | 45°y-cut   | 45°z-cut    | 45°z-cut    | z-cut     | z-cut     |
| Wavelength<br>Range                      | 0.3- 1.0μm | 0.3- 1.0μm | 0.2 – 1.2μm | 0.2 – 1.2μm | 0.5-4.0μm | 0.5-4.0μm |
| Max:<br>Continuous<br>Applied<br>Voltage | 400        | 400        | 400         | 400         | 400       | 400       |
| Extinction<br>Ratio                      | ~100:1     | ~150:1     | ~150:1      | ~200:1      | ~100:1    | ~200:1    |
| Capacitance                              | 60pf       | 60pf       | 40pf        | 40pf        | 60pf      | 60pf      |
| Cell Diameter                            | 40mm       | 40mm       | 40mm        | 40mm        | 40mm      | 40mm      |
| Cell Length                              | 110mm      | 110mm      | 110mm       | 110mm       | 110mm     | 110mm     |
| Optical<br>Transmission                  | >85%       | >85%       | >90%        | >90%        | >90%      | >90%      |
| Connectors:                              | BNC        |            |             |             |           |           |

Specifications for guidance only, subject to modification without notice.



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