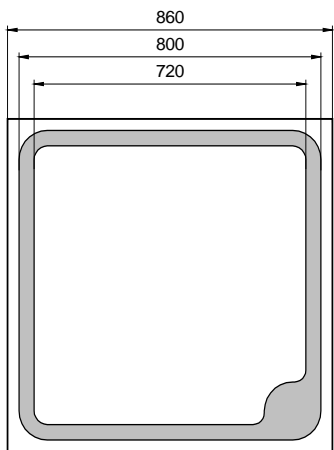


| Wavelength range    | Type              | Technology  | Electrodes   |
|---------------------|-------------------|-------------|--------------|
| Infrared, selective | Integrated filter | AlGaAs/GaAs | P (anode) up |

|   |  |  |
|---|--|--|
|  | typ. dimensions (µm)   | <b>Description</b><br>Infrared-selective photodiode with narrow response range (680-770 nm)<br><br><b>Applications</b><br>Optical communications, safety equipment, light barriers |
|   | typ. thickness<br>300 (±20) µm<br><br>anode<br>gold alloy, 1.5 µm<br><br>cathode<br>gold alloy, 0.5 µm |  |

## Miscellaneous Parameters

$T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified

| Parameter                   | Test conditions | Symbol    | Value       | Unit            |
|-----------------------------|-----------------|-----------|-------------|-----------------|
| Active area                 |                 | A         | 0.62        | mm <sup>2</sup> |
| Operating temperature range |                 | $T_{amb}$ | -40 to +125 | °C              |
| Storage temperature range   |                 | $T_{stg}$ | -40 to +125 | °C              |

## Optical and Electrical Characteristics

$T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified

| Parameter                                | Test conditions        | Symbol                | Min | Typ   | Max | Unit |
|--|------------------------|-----------------------|-----|-------|-----|------|
| Reverse voltage <sup>2</sup>             | $I_R = 10 \mu\text{A}$ | $V_R$                 | 5   |       |     | V    |
| Dark current                             | $V_R = 5 \text{ V}$    | $I_D$                 |     | 40    | 200 | pA   |
| Responsivity at $\lambda_P$ <sup>1</sup> | $V_R = 0 \text{ V}$    | $S_\lambda$           |     | 0.5   |     | A/W  |
| Peak sensitivity                         | $V_R = 0 \text{ V}$    | $\lambda_P$           |     | 740   |     | nm   |
| Spectral range at 10 %                   | $V_R = 0 \text{ V}$    | $\lambda_{0.5}$       | 680 |       | 770 | nm   |
| Spectral bandwidth at 50%                | $V_R = 0 \text{ V}$    | $\Delta\lambda_{0.4}$ |     | 80    |     | nm   |
| Junction capacitance                     | $V_R = 0 \text{ V}$    | $C_J$                 |     | 40    |     | pF   |
| Switching time                           | $V_R = 5 \text{ V}$    | $t_r, t_f$            |     | 15/30 |     | ns   |

<sup>1</sup>Measured on bare chip on TO-18 header

<sup>2</sup>information only

## Labeling

| Type        | Typ. $I_D$ [pA] | Typ. $S_\lambda$ [A/W] | Lot N° | Quantity |
|-------------|-----------------|------------------------|--------|----------|
| EPC-740-0.9 |                 |                        |        |          |

**Packing:** Chips on adhesive film with wire-bond side on top

\*Note: All measurements carried out with *EPIGAP* equipment

