

| Wavelength | Type | Technology  | Case     |
|------------|------|-------------|----------|
| Red        | SMD  | AlGaAs/GaAs | SMD 1206 |

all dimensions: mm  
all tolerances: ± 0,1

**Description**

Narrow bandwidth and high spectral sensitivity in the red visible range (610...700 nm), compact design in standard SMD package allows for easy circuit board mounting and assembling of arrays

**Applications**

Light barriers, optical communications, safety equipment, alarm systems

**Miscellaneous Parameters**

T<sub>amb</sub> = 25°C, unless otherwise specified

| Parameter                   | Test conditions | Symbol           | Value       | Unit            |
|-----------------------------|-----------------|------------------|-------------|-----------------|
| Active area                 |                 | A                | 0.62        | mm <sup>2</sup> |
| Operating temperature range |                 | T <sub>amb</sub> | -20 to +85  | °C              |
| Storage temperature range   |                 | T <sub>stg</sub> | -40 to +125 | °C              |

**Optical and Electrical Characteristics**

T<sub>amb</sub> = 25°C, unless otherwise specified

| Parameter   | Test conditions        | Symbol                              | Min | Typ                   | Max | Unit                       |
|---|------------------------|-------------------------------------|-----|-----------------------|-----|----------------------------|
| Breakdown voltage <sup>1)</sup>                     | I <sub>R</sub> = 10 μA | V <sub>R</sub>                      |     | 10                    |     | V                          |
| Dark current (E <sub>e</sub> = 0 W/m <sup>2</sup> ) | V <sub>R</sub> = 1 V   | I <sub>D</sub>                      |     | 40                    | 300 | pA                         |
| Responsivity at λ <sub>p</sub>                      | V <sub>R</sub> = 0 V   | S <sub>λ</sub>                      |     | 0.42                  |     | A/W                        |
| Peak sensitivity                                    | V <sub>R</sub> = 0 V   | λ <sub>p</sub>                      |     | 660                   |     | nm                         |
| Sensitivity range at 50%                            | V <sub>R</sub> = 0 V   | λ <sub>min</sub> , λ <sub>max</sub> | 620 |                       | 700 | nm                         |
| Spectral bandwidth at 50%                           | V <sub>R</sub> = 0 V   | Δλ <sub>0.5</sub>                   |     | 80                    |     | nm                         |
| Shunt resistance                                    | V <sub>R</sub> = 10 mV | R <sub>SH</sub>                     | 200 | 400                   |     | GΩ                         |
| Noise equivalent power                              | λ = 660 nm             | NEP                                 |     | 8.5x10 <sup>-15</sup> |     | W/√Hz                      |
| Specific detectivity                                | λ = 660 nm             | D*                                  |     | 9.2x10 <sup>12</sup>  |     | cm · √Hz · W <sup>-1</sup> |
| Junction capacitance                                | V <sub>R</sub> = 0 V   | C <sub>J</sub>                      |     | 40                    |     | pF                         |
| Switching time (R <sub>L</sub> = 50 Ω)              | V <sub>R</sub> = 1 V   | t <sub>r</sub> , t <sub>f</sub>     |     | 40                    |     | ns                         |

<sup>1)</sup>for information only

**Labeling**

| Type          | Lot N° | Typ. S <sub>λ</sub> [A/W] | Quantity |
|---------------|--------|---------------------------|----------|
| EPD-660-1-0.9 |        |                           |          |

\*Note: All measurements carried out with EPIGAP equipment

Optical sensitivity (typically)

