

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

|  |                                      |   |
|--|--------------------------------------|---|
| <p style="text-align: center;">PD-02</p> | typ. dimensions (µm)                 | <b>Description</b><br>Infrared-selective photodiode with narrow response range (810 - 950 nm) |
|  | typ. thickness<br>300 (±20) µm       |   |
|  | <u>anode</u><br>gold alloy, 1.5 µm   |   |
|  | <u>cathode</u><br>gold alloy, 0.5 µm |   |

**Miscellaneous Parameters**

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

| Parameter                   | Test conditions | Symbol           | Value       | Unit            |
|-----------------------------|-----------------|------------------|-------------|-----------------|
| Active area                 |                 | A                | 0.17        | mm <sup>2</sup> |
| Operating temperature range |                 | T <sub>amb</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 |
|---|----------------------|---------------------------------|------|------|-----|------|
| Dark current                                | V <sub>R</sub> = 1 V | I <sub>D</sub>                  |      | 1.0  | 2.5 | nA   |
| Peak sensitivity                            | V <sub>R</sub> = 0 V | λ <sub>P</sub>                  |      | 890  |     | nm   |
| Spectral range at 50 %                      | V <sub>R</sub> = 0 V | λ <sub>0.5</sub>                | 820  |      | 935 | nm   |
| Spectral bandwidth at 50%                   | V <sub>R</sub> = 0 V | Δλ <sub>0.5</sub>               |      | 115  |     | nm   |
| Responsivity at λ <sub>P</sub> <sup>1</sup> | V <sub>R</sub> = 0 V | S <sub>λ</sub>                  | 0.15 | 0.25 |     | A/W  |
| Switching time                              | V <sub>R</sub> = 1 V | t <sub>r</sub> , t <sub>f</sub> |      | 170  |     | ns   |

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

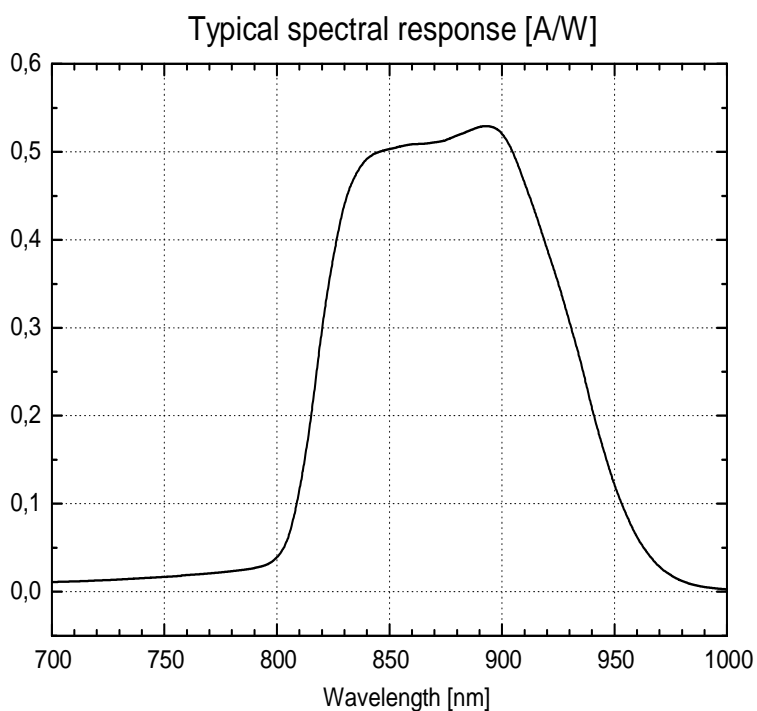
\*Note: All measurements carried out with JENOPTIK Polymer Systems equipment

**Labeling**

| Type        | Typ. I <sub>D</sub> [pA] | Typ. S <sub>λ</sub> [A/W] | Lot N° | Quantity |
|-------------|--------------------------|---------------------------|--------|----------|
| EPC-880-0.5 |                          |                           |        |          |

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

| Environmental             |              | Symbol     | Min | Typ | Max | Unit |
|---------------------------|--------------|------------|-----|-----|-----|------|
| Storage Temperature       | on Blue Tape | $T_{STG}$  | 15  |     | 30  | °C   |
| Storage Relative Humidity | on Blue Tape | $RH_{STG}$ | 40  |     | 75  | % RH |
| Storage Time              | on Blue Tape | $t_{STG}$  |     |     | 1   | year |



We reserve the right to make changes to improve technical design and may do so without further notice. Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer.