





## Absolute Maximum Ratings (Ta=25°C)

| Parameter                          | Symbol             | Condition                                      | Min. | Typ.                   | Max. | Unit                    |
|------------------------------------|--------------------|--|------|------------------------|------|-------------------------|
| Recommended Spot Size              | Dia                |  | Φ0.1 |                        | Φ2   | mm                      |
| Damage Threshold cw                |                    |  |      | 300                    |      | mw/cm <sup>2</sup>      |
| Damage 10ns Pulse                  |                    |  |      | 1500                   |      | mJ/cm <sup>2</sup>      |
| Short circuit Current              | I <sub>sc</sub>    | Ev=100lx fc=2856k*                             |      | 43                     |      | μA                      |
| Isc Temperature Coefficient        | TC Isc             | 2856k  |      | 1.1                    |      | %/°C                    |
| Open Circuit Voltage               | Voc                | Ev=100lx fc=2856k*                             |      | 351                    |      | mV                      |
| Voc Temperature Coefficient        | TC Voc             | 2856k  |      | -2.2                   |      | mV/°C                   |
| Dark current                       | I <sub>d</sub>     | VR=10mV  |      | 20                     |      | pA                      |
|                                    |                    | VR=10V   |      | 240                    |      |                         |
| Rise time                          | t <sub>r</sub>     | V <sub>R</sub> =5V;λ=850nm;R <sub>L</sub> =50Ω |      | 50                     |      | ns                      |
| Temp coefficient of I <sub>d</sub> | T <sub>cid</sub>   |  |      | 0.18                   |      | times/°C                |
| Reverse breakdown voltage          | V <sub>(BR)R</sub> | I <sub>R</sub> =100μA Ev=0lx                   | 33   |                        |      | V                       |
| Junction Capacitance               | C <sub>J</sub>     | V <sub>R</sub> =0V f=1MHz                      |      | 27                     |      | pF                      |
|                                    |                    | V <sub>R</sub> =10V f=1MHz                     |      | 8                      |      |                         |
| Cut-off frequency                  | f <sub>-3dB</sub>  | V <sub>R</sub> =0V, R <sub>L</sub> =50Ω        |      | 40                     |      | MHz                     |
|                                    |                    | V <sub>R</sub> =10V, R <sub>L</sub> =50Ω       |      | 110                    |      |                         |
| CrossTalk Channel-to-Channel       |                    | 400-850nm, Adjacent Channel                    |      | 0.1                    | 0.5  | %                       |
|                                    |                    | 850-1100nm, Adjacent Channels                  |      | 1                      | 5    |                         |
| Uniformity of each Element         | %                  |  | 0.8  |                        | 2    | %                       |
| Photo sensitivity                  | S <sub>R</sub>     | 650nm  |      | 0.38                   |      | A/W                     |
|                                    |                    | 940nm  |      | 0.64                   |      |                         |
| Spectral Application Range         | λ <sub>range</sub> |  | 400  |                        | 1100 | nm                      |
| Spectral Response-Peak             | λ <sub>p</sub>     |  |      | 940                    |      | nm                      |
| Shunt resistance                   | R <sub>sh</sub>    | V <sub>R</sub> =10mV                           |      | 0.5                    |      | GΩ                      |
| Rsh Temperature Coefficient        | TC R <sub>sh</sub> | Ev=100lx, VR=10mV                              |      | 0.18                   |      | %/°C                    |
| Angular Resp 50% Resp Pt           | θ <sub>1/2</sub>   |  |      | ±55                    |      | Degrees                 |
| Noise Equivalent Power             | NEP                | V <sub>R</sub> =10V λ =940nm                   |      | 1.37×10 <sup>-14</sup> |      | W/Hz <sup>1/2</sup>     |
| Specific Detectivity               | D*                 | V <sub>R</sub> =10V λ =940nm                   |      | 2.92×10 <sup>13</sup>  |      | cm(Hz/W) <sup>1/2</sup> |

\* Ev: Illuminance by CIE standard light source A (tungsten lamp)

Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject change without notice

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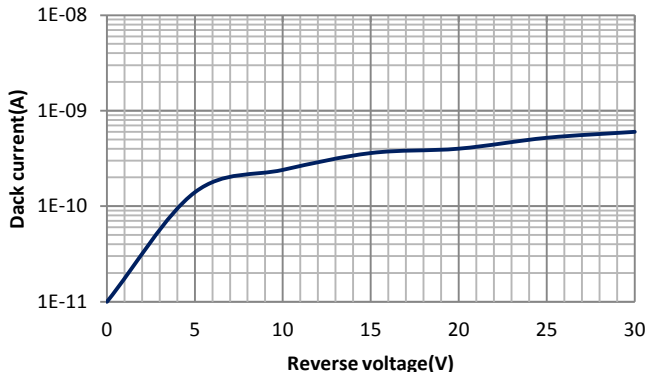
FAX:+86-21-54971823

EMAIL:sales@otron-sensor.com

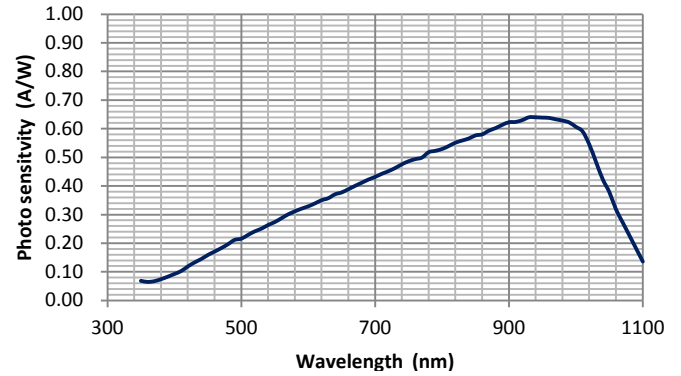
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## ■ Dark current vs. reverse voltage

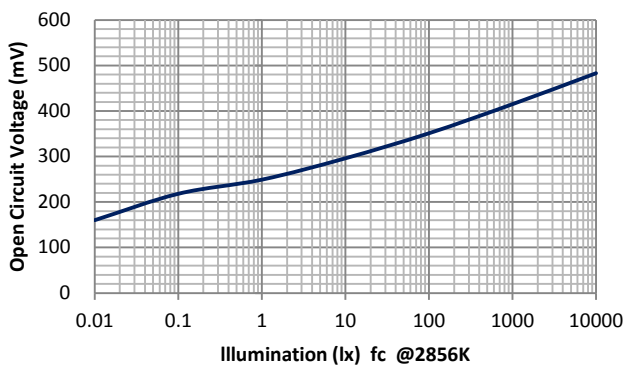


## ■ Spectral response



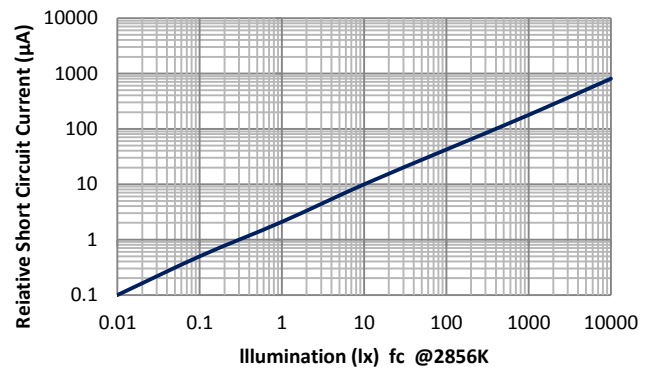
## ■ Open circuit Voltage

vs Illumination



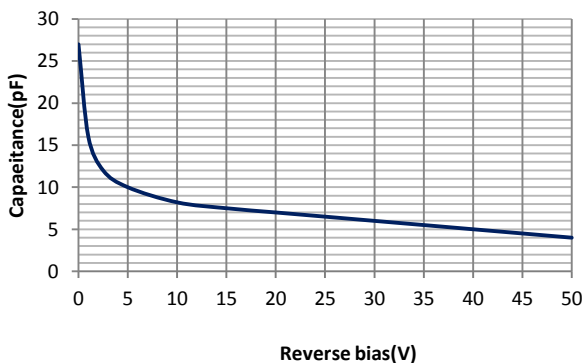
## ■ Relative Short Circuit

Current vs. Illumination

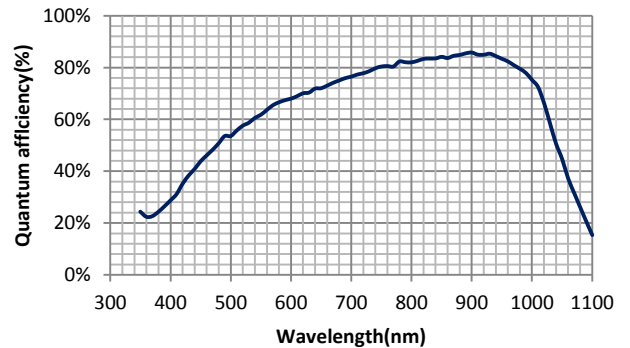


## ■ Relative Junction Capacitance

VS. Voltage



## ■ Quantum efficiency



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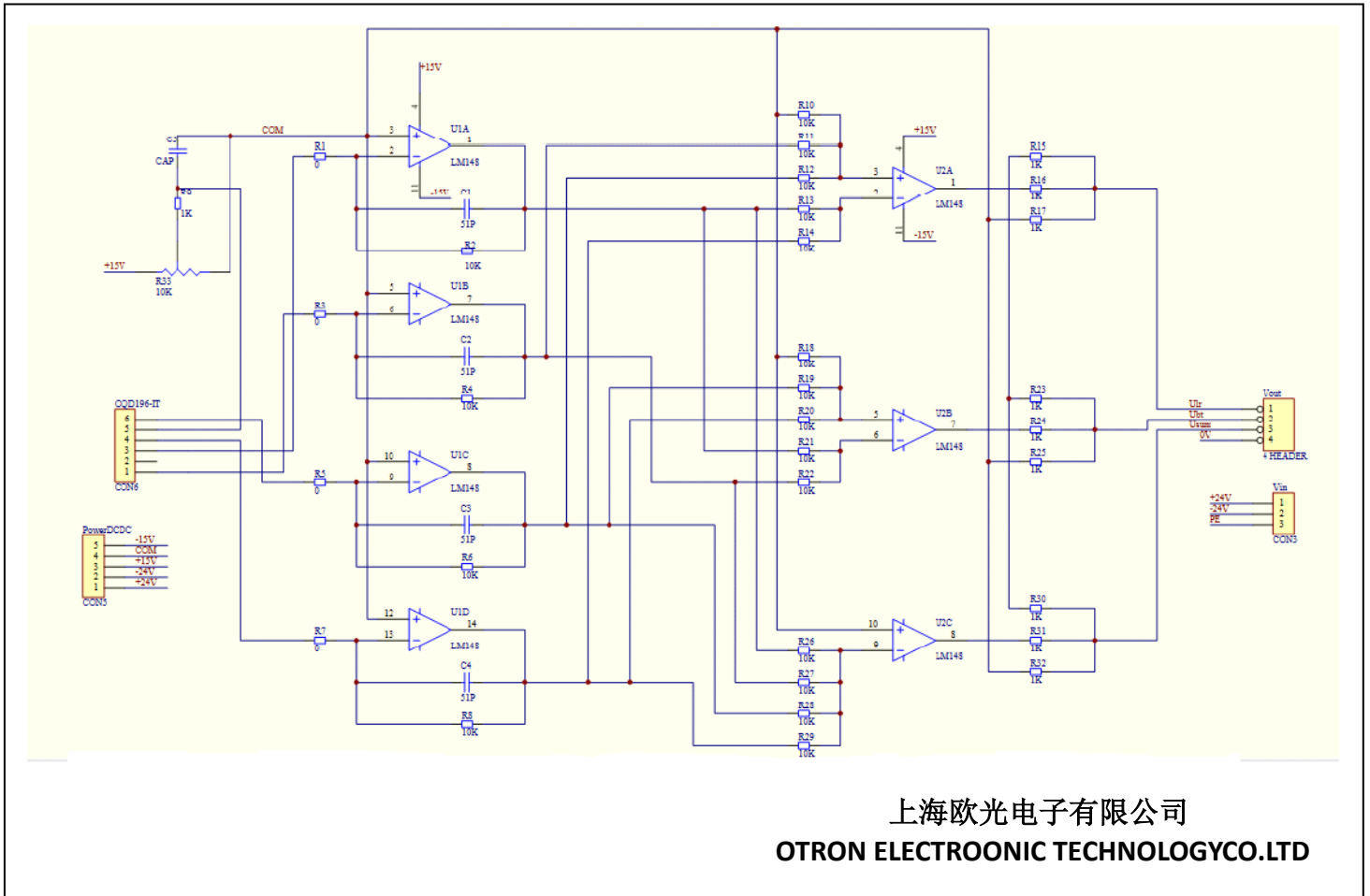
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## APPLICATION CIRCUIT



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