

PNZ331CL (PN331CL)

PIN Photodiode

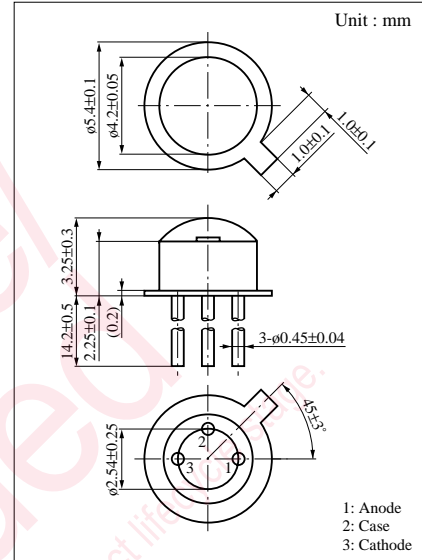
For optical fiber communication systems

■ Features

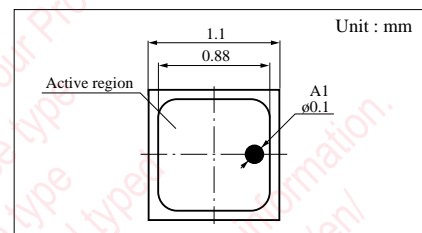
- TO-18 standard type package
- High coupling capability suitable for plastic fiber
- High quantum efficiency
- High-speed response

■ Absolute Maximum Ratings (Ta = 25°C)

| Parameter | Symbol | Ratings | Unit |
|-------------------------------|-----------|-------------|------|
| Reverse voltage (DC) | V_R | 30 | V |
| Power dissipation | P_D | 50 | mW |
| Operating ambient temperature | T_{opr} | -25 to +85 | °C |
| Storage temperature | T_{stg} | -30 to +100 | °C |



■ Dimensions of detection area



■ Electro-Optical Characteristics (Ta = 25°C)

| Parameter | Symbol | Conditions | min | typ | max | Unit |
|------------------------------|---------------|--|-----|----------------|-----|---------------|
| Dark current | I_D | $V_R = 10V$ | | 0.1 | 10 | nA |
| Photo current | I_L | $V_R = 10V, L = 1000 \text{ lx}^*1$ | 7 | 14 | | μA |
| Peak sensitivity wavelength | λ_p | $V_R = 10V$ | | 900 | | nm |
| Response time | t_r, t_f^*2 | $V_R = 10V, R_L = 50\Omega$ | | 2 | | ns |
| Capacitance between pins | C_t | $V_R = 10V$ | | 3 | | pF |
| Photodetection sensitivity | R | $V_R = 10V, \lambda = 800\text{nm}$ | | 0.55 | | A/W |
| Acceptance half angle | θ | Measured from the optical axis to the half power point | | 70 | | deg. |
| Photodetection surface shape | D | Effective detection area | | $\square 0.88$ | | mm |

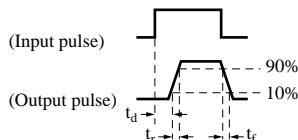
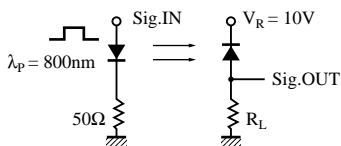
Note 1) Spectral sensitivity: Sensitivity at wavelengths exceeding 400 nm as a percentage of maximum sensitivity is 100%

Note 2) This product is not designed to withstand electromagnetic radiation or heavy-charge particles.

Note 3) Difficult to guarantee compliance with moisture resistance standard (MIL-STD-202D)

*1 Measurements were made using a tungsten lamp (color temperature $T = 2856K$) as a light source.

*2 Switching time measurement circuit (see figure below)

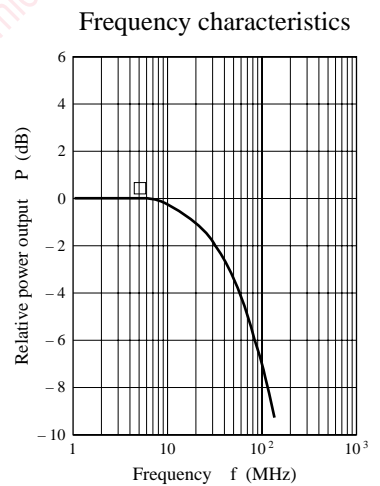
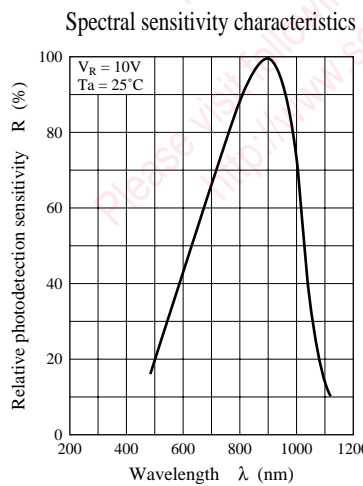
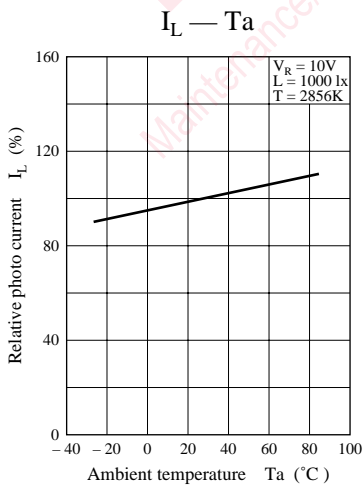
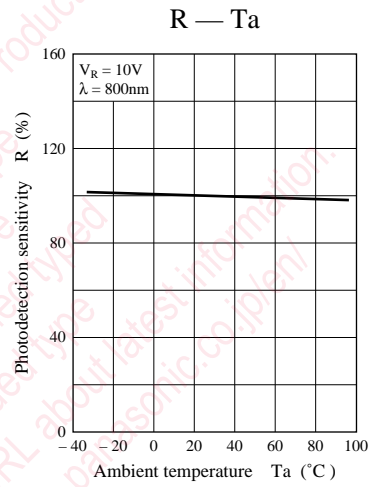
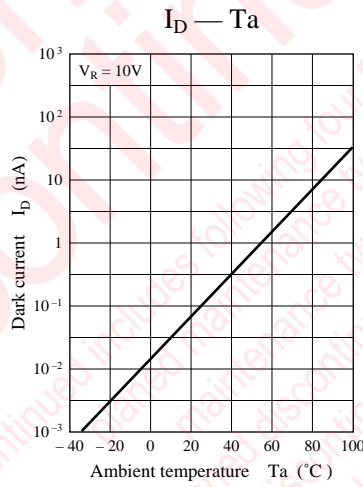
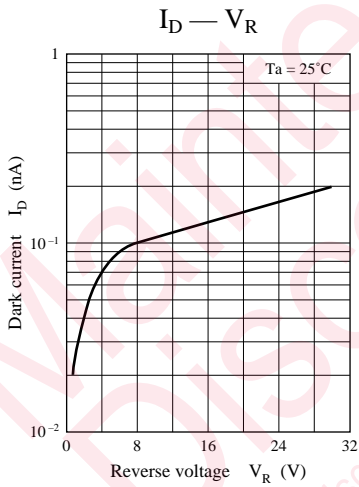
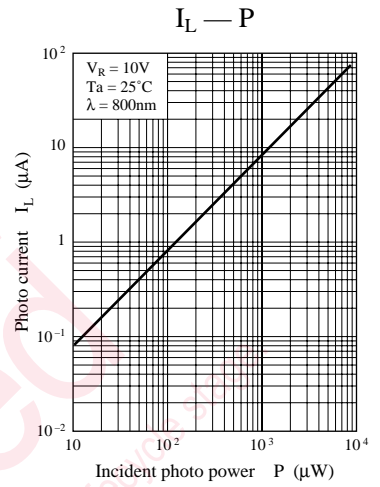
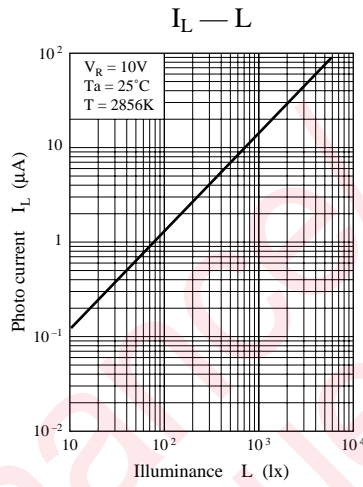
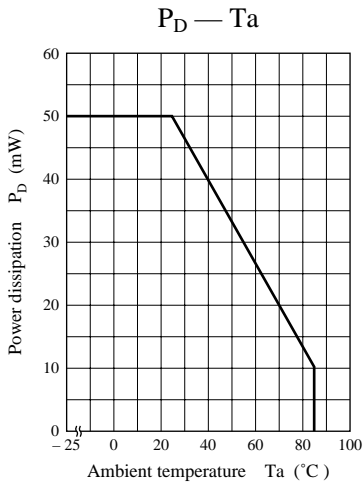


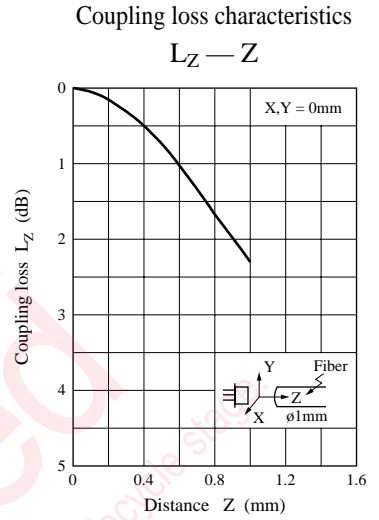
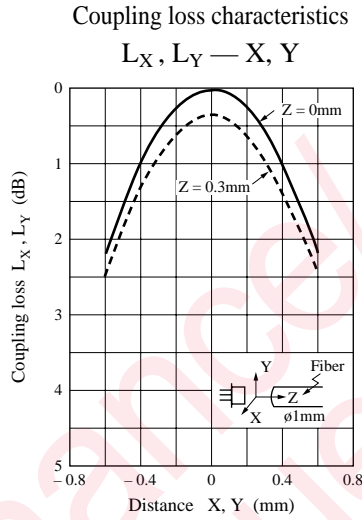
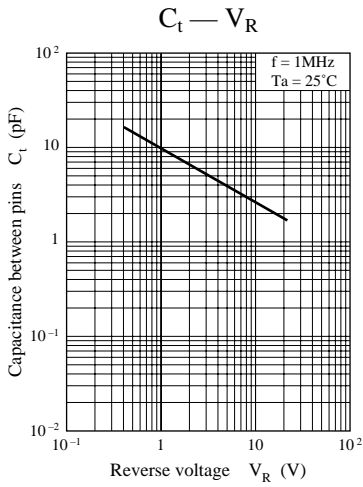
t_d : Delay time

t_r : Rise time (Time required for the collector photo current to increase from 10% to 90% of its final value)

t_f : Fall time (Time required for the collector photo current to decrease from 90% to 10% of its initial value)

Note) The part number in the parenthesis shows conventional part number.





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 1. planned maintenance type
 2. maintenance type
 3. planned discontinued type
 4. discontinued type
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