

# Data sheet

Sensing type	Through-beam type
Sensing distance	5mm
Sensing target	Opaque
Min. sensing target	$\geq \varnothing 0.8\text{mm} \times 2\text{mm}$
Hysteresis (distance)	$\leq 0.05\text{mm}$
Response time	Light ON: Max. $20\mu\text{s}$ , Dark ON: Max. $100\mu\text{s}$
Response frequency	2kHz
Light source	Infrared LED
Peak emission wavelength	940nm
Operation mode	Light ON/Dark ON(set by control wire)
Indicator	Operation indicator (red LED)
Weight	Approx. 30g
Power supply	5-24VDC $\pm 10\%$ (ripple P-P : max. 10%)
Current consumption	Max. 30mA
Control output	NPN open collector
Load voltage	$\leq 30\text{VDC}$
Load current	Max. 100mA
Residual voltage	NPN: $\leq 1.2\text{VDC}$ , PNP: $\leq 1.2\text{VDC}$
Protection circuit	Reverse polarity protection circuit, output overcurrent (short-circuit) protection circuit
Insulation resistance	$\geq 20\text{M}\Omega$ (250 VDC megger)
Noise immunity	The square wave noise (pulse width: $1\mu\text{s}$ ) by the noise simulator $\pm 240\text{VDC}$
Dielectric strength	1,000VAC 50/60Hz for 1 minute
Vibration	1.5mm amplitude (max. acceleration $196\text{m/s}^2$ ) at frequency of 10 to 2,000Hz in each X, Y, Z direction for 2 hours
Shock	$15,000\text{ m/s}^2$ (approx. 1,500G) in each X, Y, Z direction for 3 times
Environment_Ambient illumination	Fluorescent lamp: Max. 1,000lx(received illumination)
Environment_Ambient temperature	-20 to $55^\circ\text{C}$ , storage : -25 to $85^\circ\text{C}$
Environment_Ambient humidity	35 to 85% RH, storage: 35 to 85% RH
Protection structure	IP50 (IEC standard)
Connection	Connector type
Material	Case: PBT, Sensing part: PC