

Type No. S14645-05F

1. Ratings and characteristics

1.1 Absolute maximum ratings

Parameter	Symbol	Value	Unit	Remark
Operating temperature	Topr	-30 to +100	°C	(Non-condensing)
Storage temperature	Tstg	-40 to +100	°C	(Non-condensing)
Reverse current	IR	200	μ A	DC current

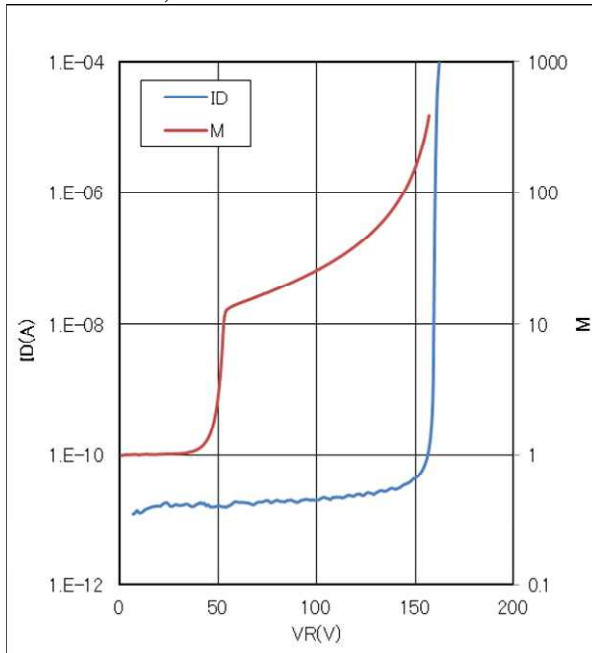
1.2 Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		--	850~950	--	nm
Peak sensitivity wavelength	λ_p	M=100	--	900	--	nm
Photo sensitivity	S	M=1, $\lambda=900$ nm	--	0.5	--	A/W
Quantum efficiency	QE	M=1, $\lambda=900$ nm	--	70	--	%
Breakdown voltage	V _{BR}	IR=100μA	155	175	195	V
Temperature coefficient of V _{BR}	γ		--	1.1	--	V/°C
Dark current	I _D	M=100	--	0.08	0.8	nA
Cut-off frequency	f _c	M=100, $\lambda=900$ nm R _L =50Ω, -3 dB	--	600	--	MHz
Terminal capacitance	C _t	M=100, f=1 MHz	--	1.0	--	pF
Excess noise figure	x	M=100, $\lambda=900$ nm	--	0.3	--	

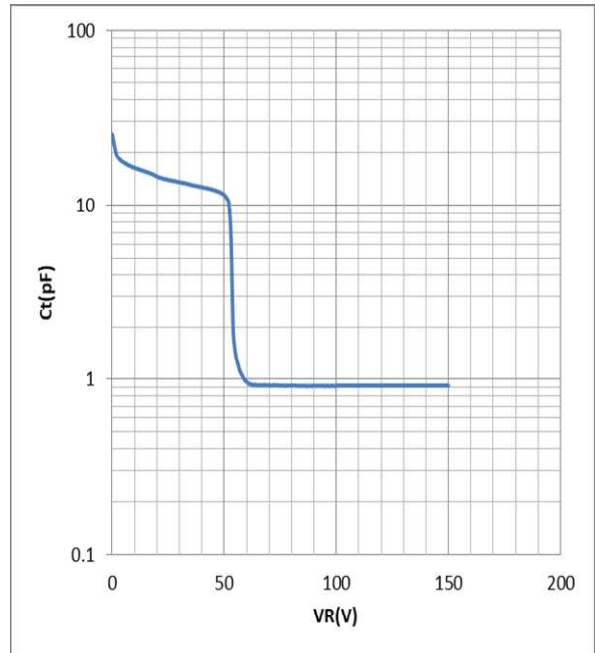
Type No. S14645-05F

1.3 Characteristic example

ID, Gain characteristics

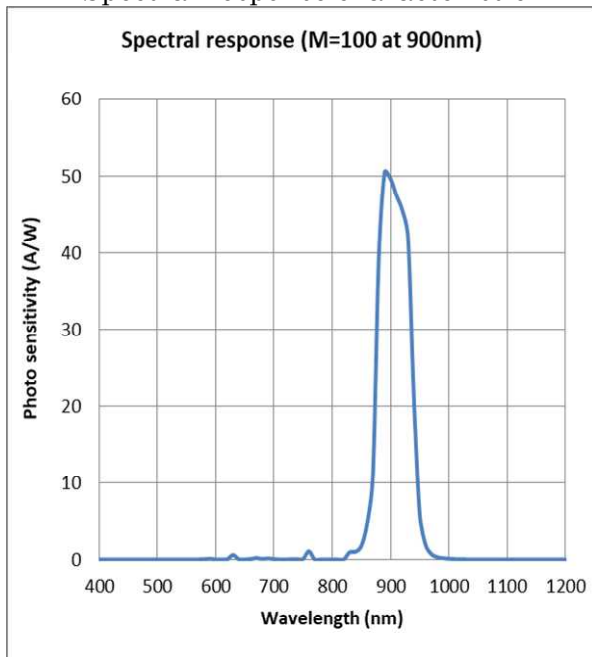


Ct characteristics



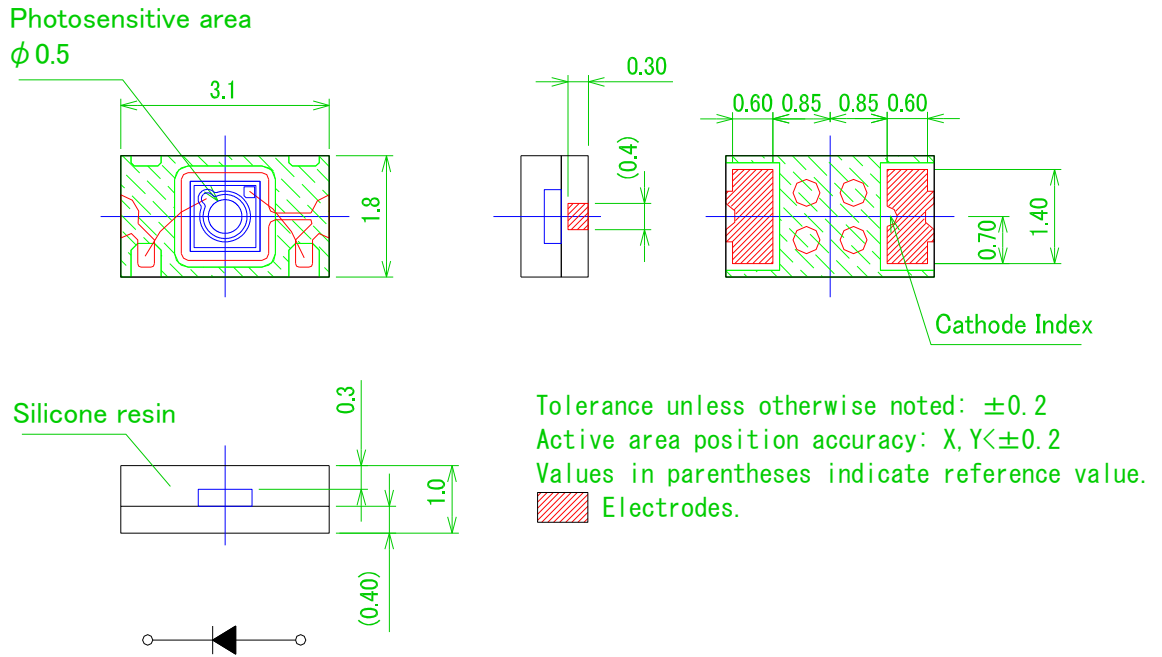
Spectral response characteristic

Spectral response (M=100 at 900nm)

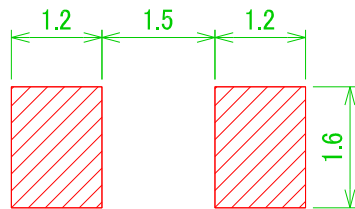


Type No. S14645-05F

2. Dimensional outline (Unit : mm)



3. Recommended land pattern (Unit:mm)

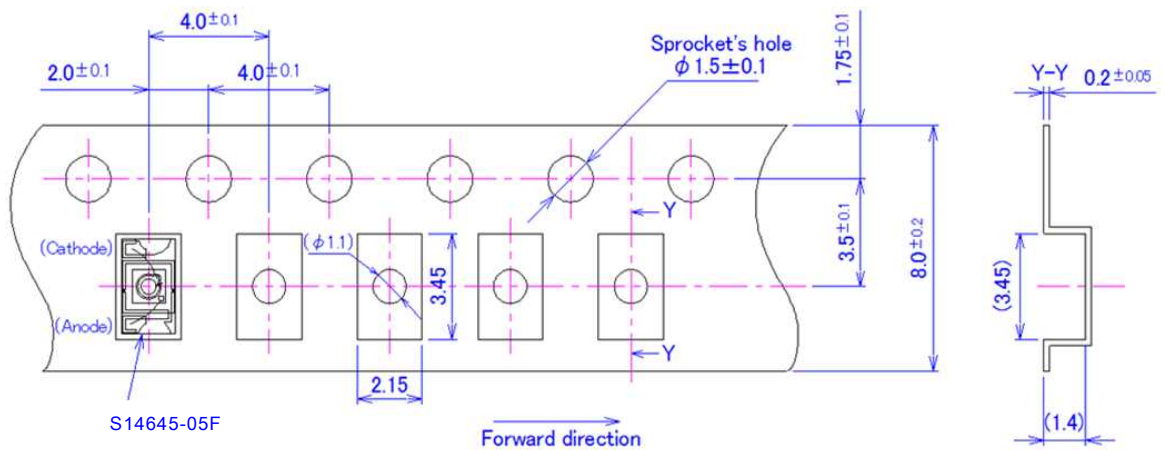


4. Packing

4.1 Embossed tape carrier (Ref. Figure.1)

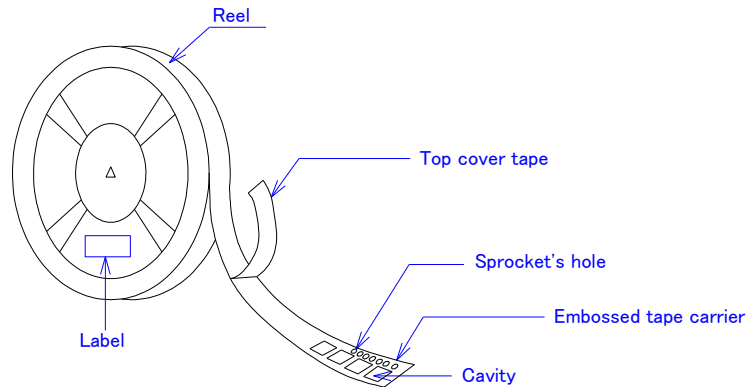
Width : 8mm, Pitch : 4mm

[Figure. 1]



Type No. S14645-05F

4.2 Taping to reel
[Figure. 2]



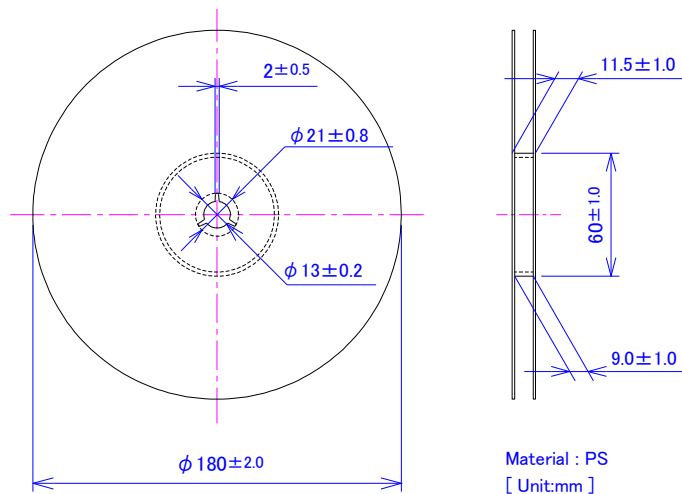
The following parameters & bar-code are indicated on the label.

- Manufacturer part number (MPN)
- Quantity (QTY)
- Lot No
- Date Code

4.3 Reel

Max. 1000pcs / reel

[Figure.3]



4.4 Moisture-proof pack

1reel/pack : enclosed silica gel.

The following parameters & bar-code are indicated on the label.

- Purchase order
- Manufacturer part number (MPN)
- Quantity (QTY)
- Lot No
- Date Code

The precaution label for moisture proof storage is stuck on the pack.

Type No. S14645-05F

5. Storage conditions after unpacking

After unpacking, store the product in accordance with the specified moisture sensitivity level (MSL), and use it within the specified period. For moisture sensitivity levels, see Table 1. The product's basic moisture sensitivity level is 2a.

[Table 1] Storage conditions by moisture sensitivity level

Moisture sensitivity level	Storage period	Storage temperature, humidity
1	Indefinitely	30 °C or less, 85% or less
2	1 year	30 °C or less, 60% or less
2a	4 weeks	30 °C or less, 60% or less
3	168 hours	30 °C or less, 60% or less
4	72 hours	30 °C or less, 60% or less
5	48 hours	30 °C or less, 60% or less
5a	24 hours	30 °C or less, 60% or less

6. Reflow soldering

The effect that the product receives during reflow soldering varies depending on the circuit board and reflow oven that are used. Before actual cleaning, check for any problems by testing out the cleaning methods in advance.

[Figure 4] Actual data example of temperature profile measured with our hot-air reflow oven for product testing (leadfree product)

