ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °C, unless otherwise specified)				
PARAMETER	**TEST CONDITION**	**SYMBOL**	**VALUE**	**UNIT**
Reverse voltage		V_R	5	V
Forward current		I_F	100	mA
Peak forward current	t_p/T = 0.5, t_p = 100 µs	I_{FM}	200	mA
Surge forward current	t_p = 100 µs	I_{FSM}	1	A
Power dissipation		P_V	190	mW
Junction temperature		T_j	100	°C
Operating temperature range		T_{amb}	-40 to +85	°C
Storage temperature range		T_{stg}	-40 to +100	°C
Soldering temperature	According to Fig. 7, J-STD-020	T_{sd}	260	°C
Thermal resistance junction / ambient	JESD 51	R_{thJA}	270	K/W

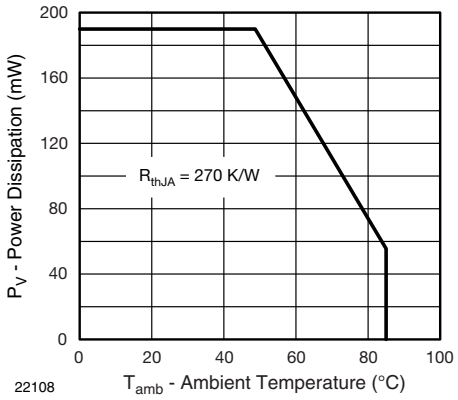


Fig. 1 - Power Dissipation Limit vs. Ambient Temperature

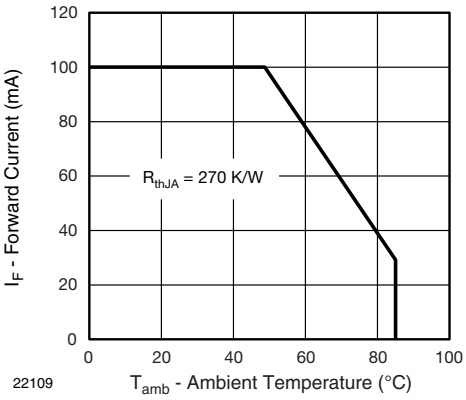


Fig. 2 - Forward Current Limit vs. Ambient Temperature

BASIC CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)						
PARAMETER	**TEST CONDITION**	**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Forward voltage	I_F = 100 mA, t_p = 20 ms	V_F	-	1.65	1.9	V
	I_F = 1 A, t_p = 100 µs	V_F	-	2.9	-	V
Temperature coefficient of V_F	I_F = 1 mA	TK_{VF}	-	-1.4	-	mV/K
	I_F = 10 mA	TK_{VF}	-	-1.18	-	mV/K
Reverse current		I_R	Not designed for reverse operation			µA
Junction capacitance	V_R = 0 V, f = 1 MHz, E = 0 mW/cm^2	C_J	-	125	-	pF
Radiant intensity	I_F = 100 mA, t_p = 20 ms	I_e	5	10	15	mW/sr
	I_F = 1 A, t_p = 100 µs	I_e	-	85	-	mW/sr
Radiant power	I_F = 100 mA, t_p = 20 ms	ϕe	-	50	-	mW
Temperature coefficient of radiant power	I_F = 100 mA	$TK\phi_e$	-	-0.35	-	%/K
Angle of half intensity		φ	-	± 60	-	deg
Peak wavelength	I_F = 100 mA	λ_p	840	850	870	nm
Spectral bandwidth	I_F = 30 mA	$\Delta\lambda$	-	30	-	nm
Temperature coefficient of λ_p	I_F = 30 mA	$TK_{\lambda p}$	-	0.25	-	nm/K
Rise time	I_F = 100 mA, 20 % to 80 %	t_r	-	10	-	ns
Fall time	I_F = 100 mA, 20 % to 80 %	t_f	-	10	-	ns
Virtual source diameter		d	-	0.5	-	mm

BASIC CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

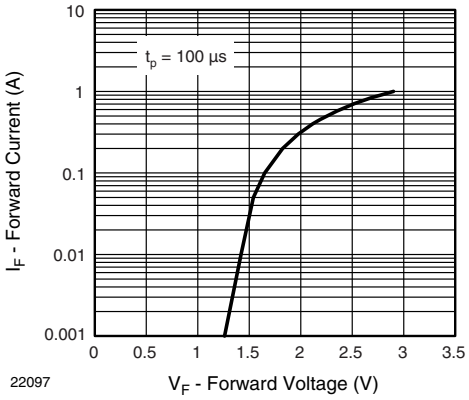


Fig. 3 - Forward Current vs. Forward Voltage

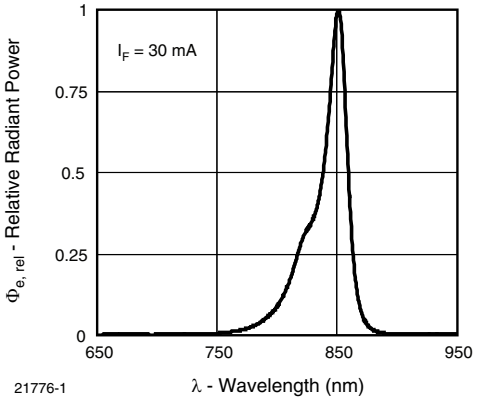


Fig. 5 - Relative Radiant Power vs. Wavelength

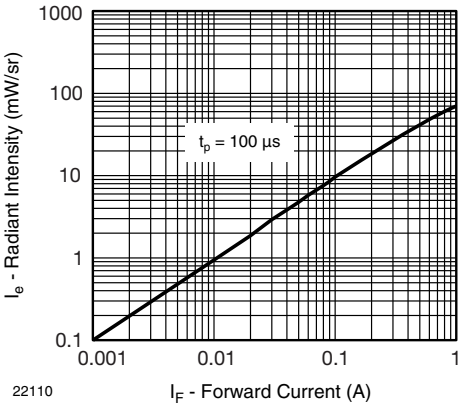


Fig. 4 - Radiant Intensity vs. Forward Current

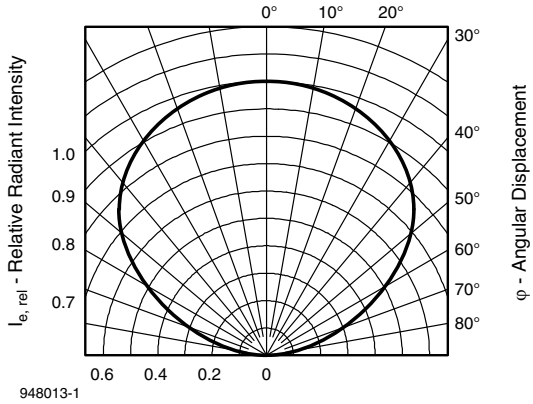


Fig. 6 - Relative Radiant Intensity vs. Angular Displacement

REFLOW SOLDER PROFILE

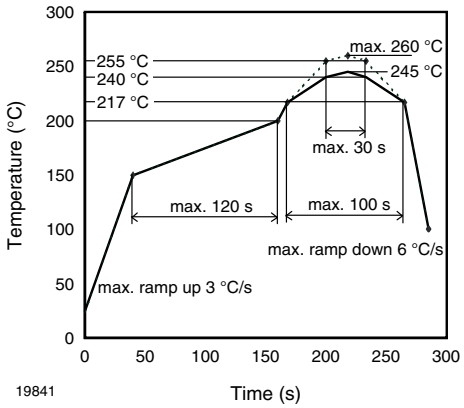


Fig. 7 - Lead (Pb)-free Reflow Solder Profile
According to J-STD-020

DRYPACK

Devices are packed in moisture barrier bags (MBB) to prevent the products from moisture absorption during transportation and storage. Each bag contains a desiccant.

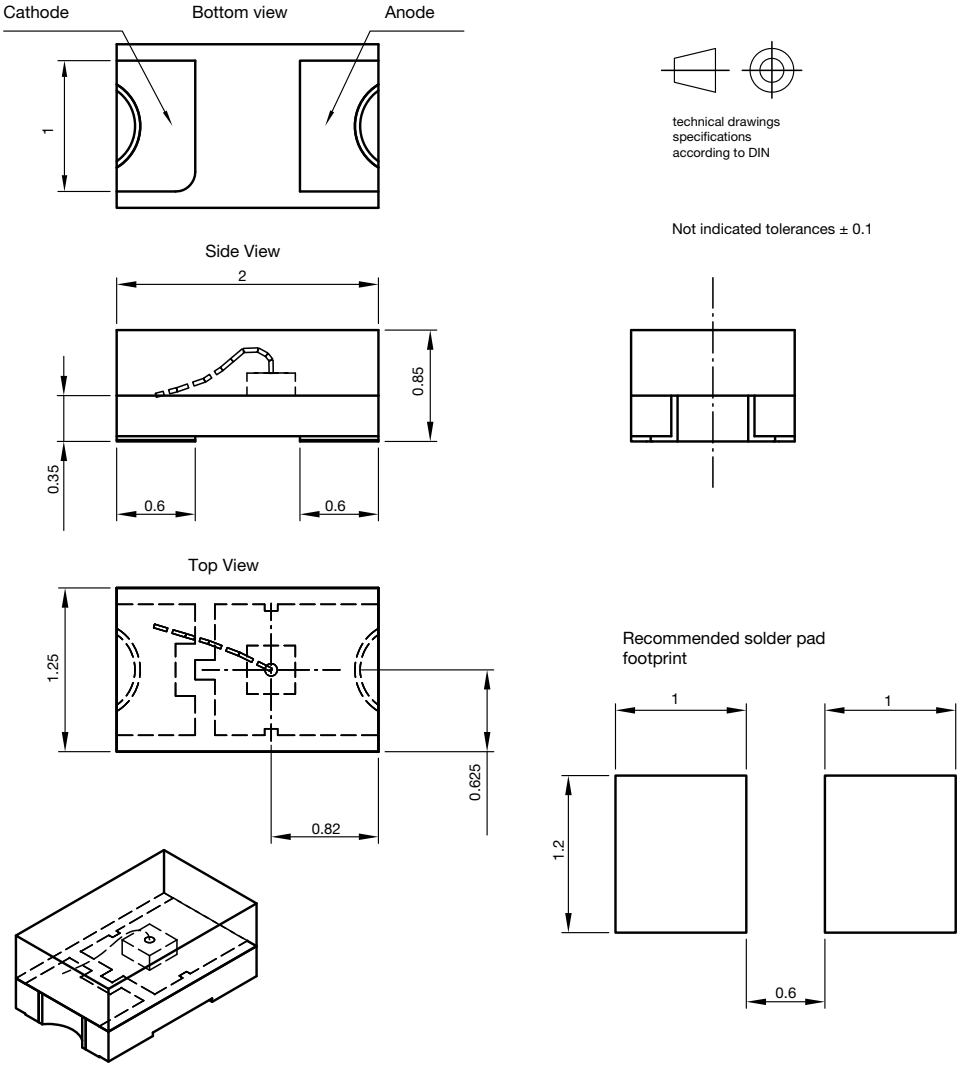
FLOOR LIFE

Time between soldering and removing from MBB must not exceed the time indicated in J-STD-020:
Moisture sensitivity: level 3
Floor life: 168 h
Conditions: T_{amb} < 30 °C, RH < 60 %

DRYING

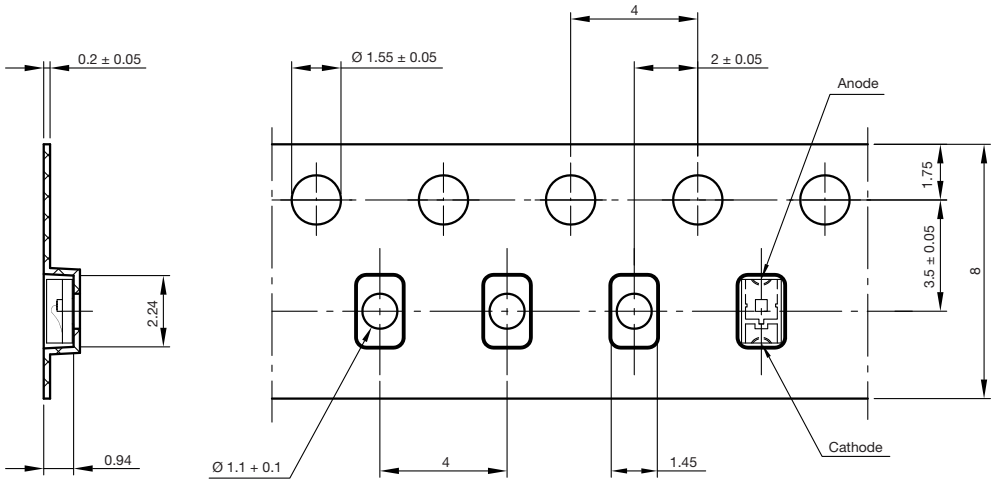
In case of moisture absorption devices should be baked before soldering. Conditions see J-STD-020 or label. Devices taped on reel dry using recommended conditions 192 h at 40 °C (+ 5 °C), RH < 5 %.

PACKAGE DIMENSIONS in millimeters



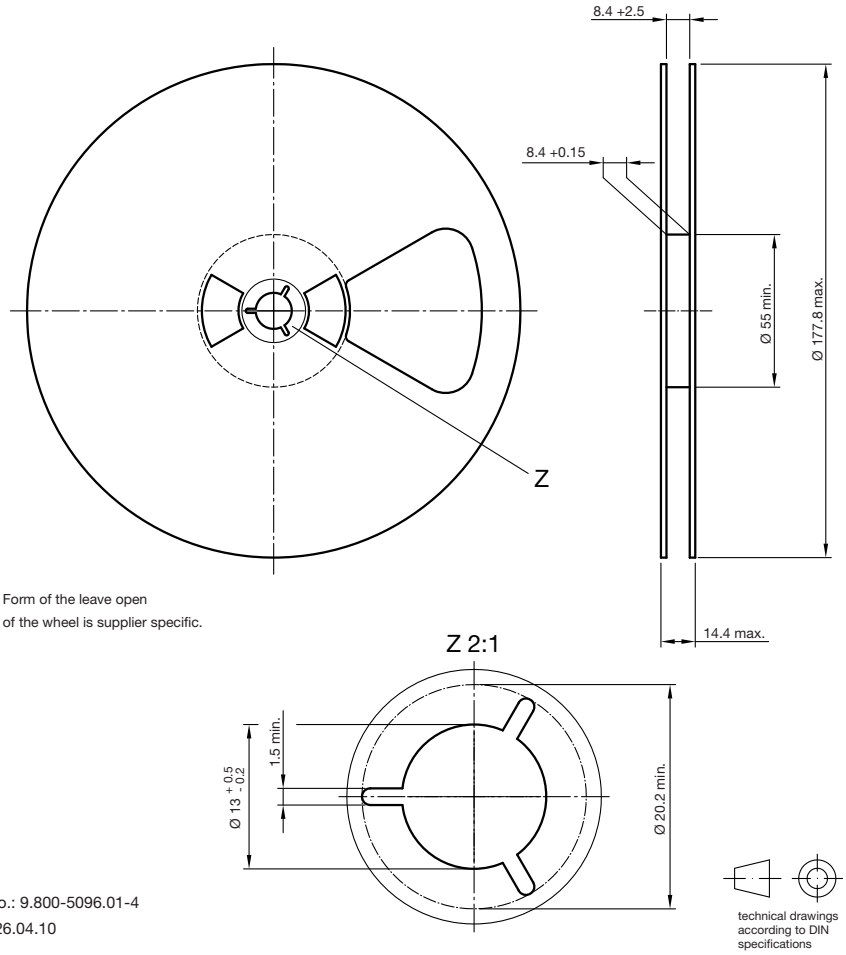
Drawing-No.: 6.541-5083.01-4
Issue: 2; 10.09.2013

BLISTER TAPE DIMENSIONS in millimeters



Drawing-No.: 9.700-5352.01-4
Issue: 1; 13.04.10
22112

REEL DIMENSIONS in millimeters



Form of the leave open
of the wheel is supplier specific.

Drawing-No.: 9.800-5096.01-4
Issue: 2; 26.04.10
20875

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