



BASIC CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 50\text{ mA}$	V_F	-	1	1.3	V
Breakdown voltage	$I_R = 100\text{ }\mu\text{A}$, $E = 0$	$V_{(BR)}$	60	-	-	V
Reverse dark current	$V_R = 10\text{ V}$, $E = 0$	I_{ro}	-	1	10	nA
Diode capacitance	$V_R = 5\text{ V}$, $f = 1\text{ MHz}$, $E = 0$	C_D	-	1.8	-	pF
Reverse light current	$E_e = 1\text{ mW/cm}^2$, $\lambda = 870\text{ nm}$, $V_R = 5\text{ V}$	I_{ra}	6.0	10	13.0	μA
	$E_e = 1\text{ mW/cm}^2$, $\lambda = 950\text{ nm}$, $V_R = 5\text{ V}$	I_{ra}	-	12	-	μA
Temperature coefficient of I_{ra}	$V_R = 5\text{ V}$, $\lambda = 870\text{ nm}$,	$TK_{I_{ra}}$	-	0.2	-	%/K
Absolute spectral sensitivity	$V_R = 5\text{ V}$, $\lambda = 870\text{ nm}$	$s(\lambda)$	-	0.60	-	A/W
	$V_R = 5\text{ V}$, $\lambda = 950\text{ nm}$	$s(\lambda)$	-	0.55	-	A/W
Angle of half sensitivity		ϕ	-	± 15	-	$^{\circ}$
Wavelength of peak sensitivity		λ_p	-	940	-	nm
Range of spectral bandwidth		$\lambda_{0.5}$	-	790 to 1050	-	nm
Rise time	$V_R = 10\text{ V}$, $R_L = 50\text{ }\Omega$, $\lambda = 820\text{ nm}$	t_r	-	4	-	ns
Fall time	$V_R = 10\text{ V}$, $R_L = 50\text{ }\Omega$, $\lambda = 820\text{ nm}$	t_f	-	4	-	ns

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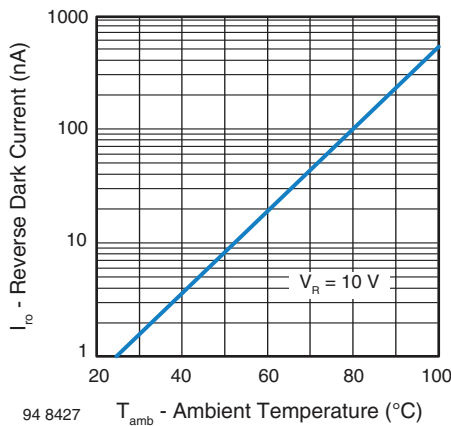


Fig. 1 - Reverse Dark Current vs. Ambient Temperature

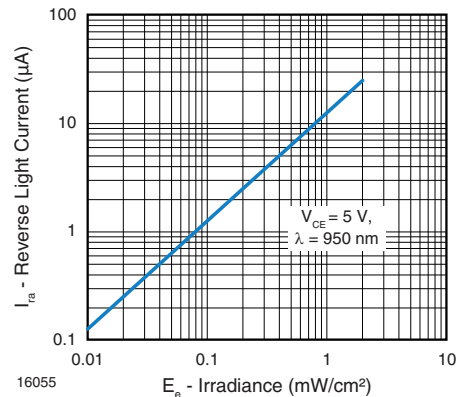


Fig. 3 - Reverse Light Current vs. Irradiance

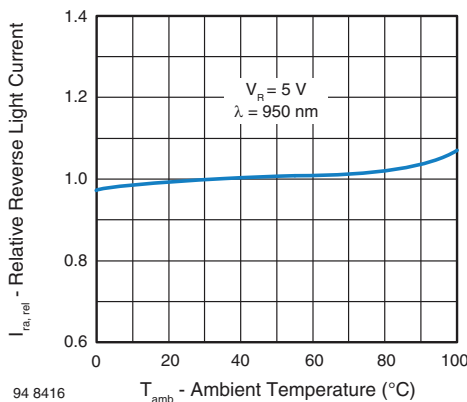


Fig. 2 - Relative Reverse Light Current vs. Ambient Temperature

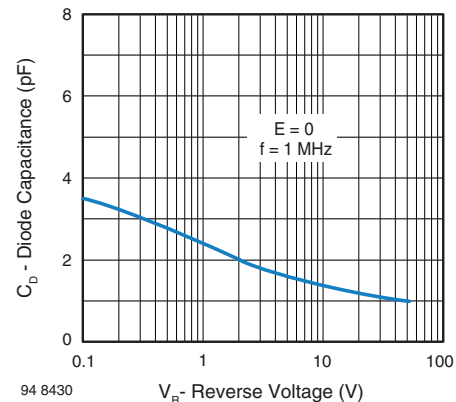


Fig. 4 - Diode Capacitance vs. Reverse Voltage

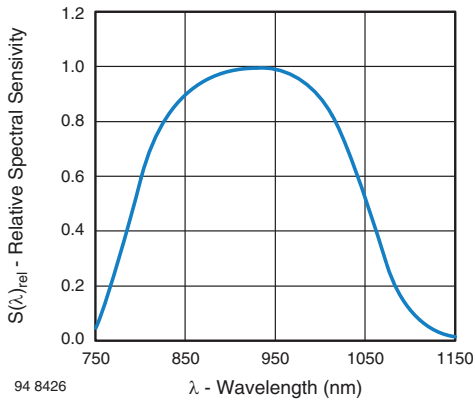


Fig. 5 - Relative Spectral Sensitivity vs. Wavelength

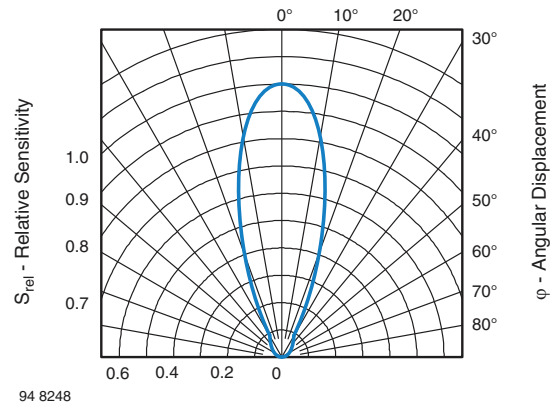


Fig. 6 - Relative Radiant Sensitivity vs. Angular Displacement

PRECAUTIONS FOR USE

1. Over-Current Proof

Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (burn out will happen).

2. Storage

- Storage temperature and rel. humidity conditions are: 5 °C to 35 °C, R.H. 60 %
- Floor life must not exceed 168 h, according to JEDEC® level 3, J-STD-020.
Once the package is opened, the products should be used within a week. Otherwise, they should be kept in a damp proof box with desiccant. Considering tape life, we suggest to use products within one year from production date
- If opened more than one week in an atmosphere 5 °C to 35 °C, R.H. 60 %, devices should be treated at 60 °C ± 5 °C for 15 h
- If humidity indicator in the package shows pink color (normal blue), then devices should be treated with the same conditions as 2.3

REFLOW SOLDER PROFILE

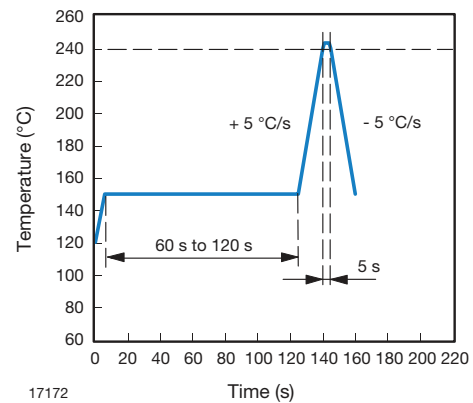


Fig. 7 - Lead Tin (SnPb) Reflow Solder Profile

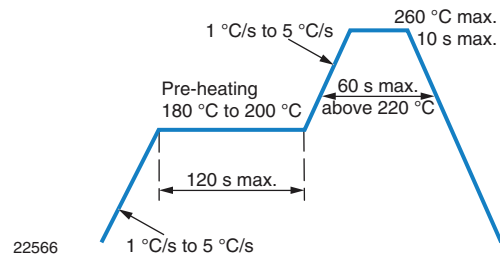
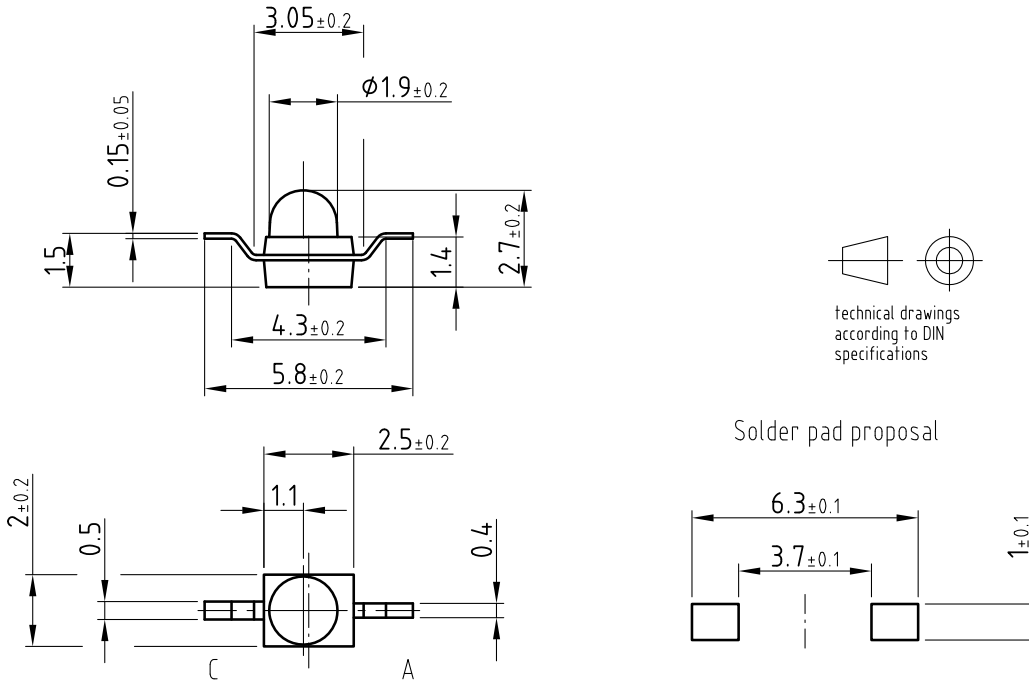


Fig. 8 - Lead (Pb)-Free Reflow Solder Profile According to J-STD-020



PACKAGE DIMENSIONS in millimeters: TEMD1000

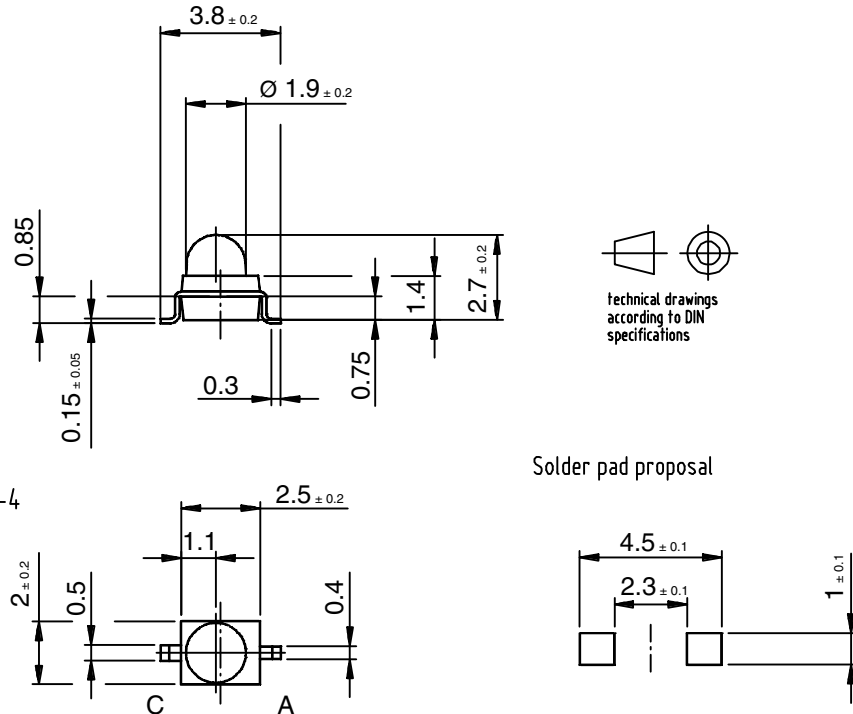


Drawing-No.: 6.544-5326.02-4

Issue: 3; 02.04.03

16159

PACKAGE DIMENSIONS in millimeters: TEMD1020



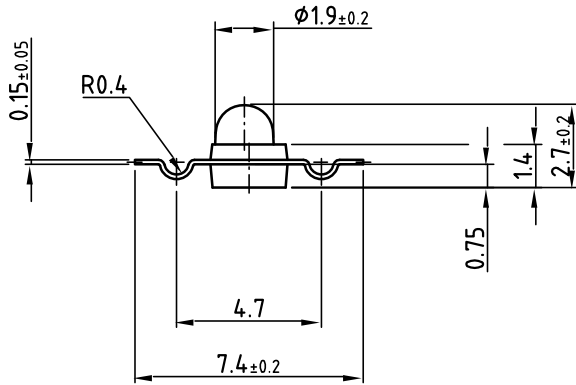
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Issue: 3; 02.04.03

16160

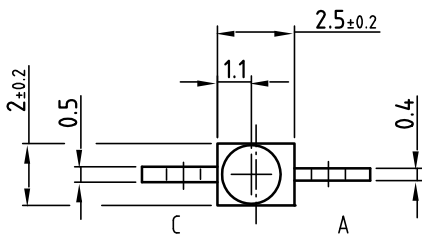
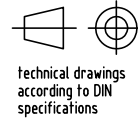


PACKAGE DIMENSIONS in millimeters: TEMD1030

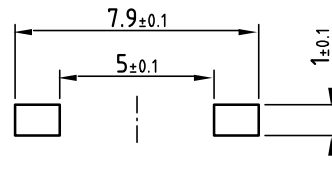


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Issue: 4; 08.05.03

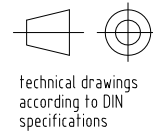
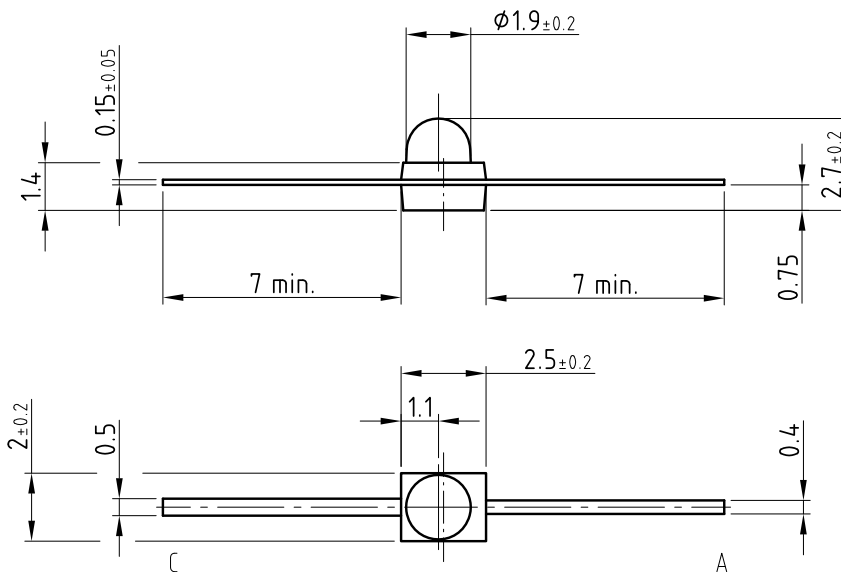


Solder pad proposal



16228

PACKAGE DIMENSIONS in millimeters: TEMD1040



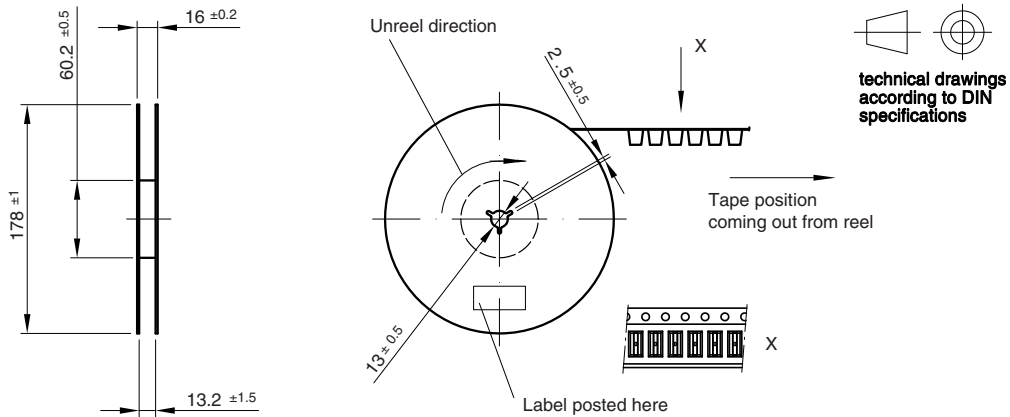
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Issue: 3; 02.04.03

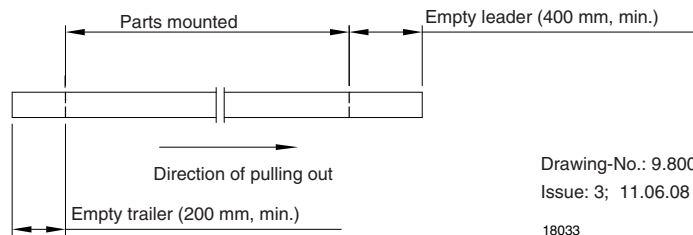
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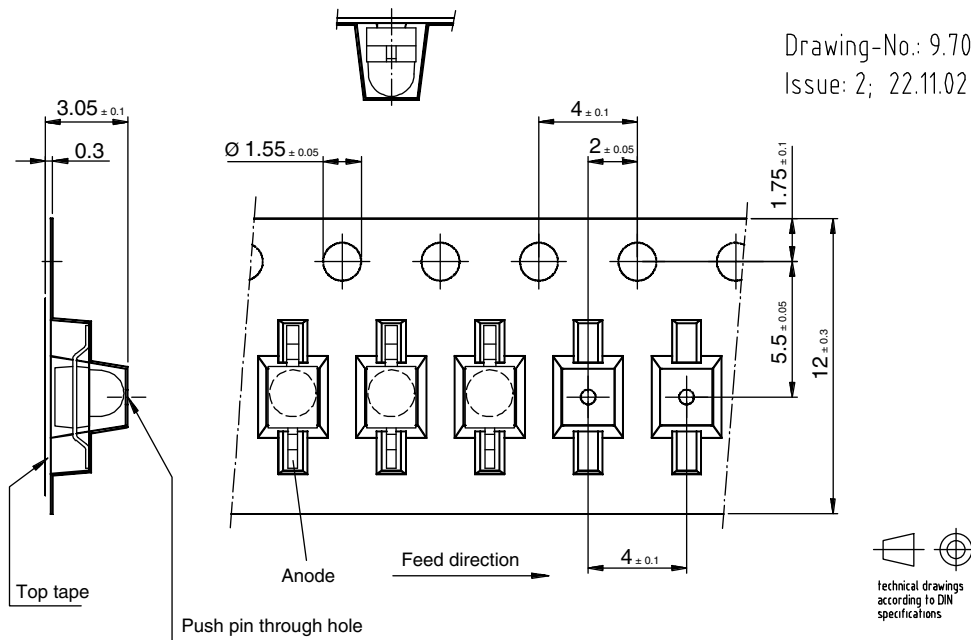
REEL DIMENSIONS in millimeters



Leader and trailer tape:



TAPING DIMENSIONS in millimeters: TEMD1000

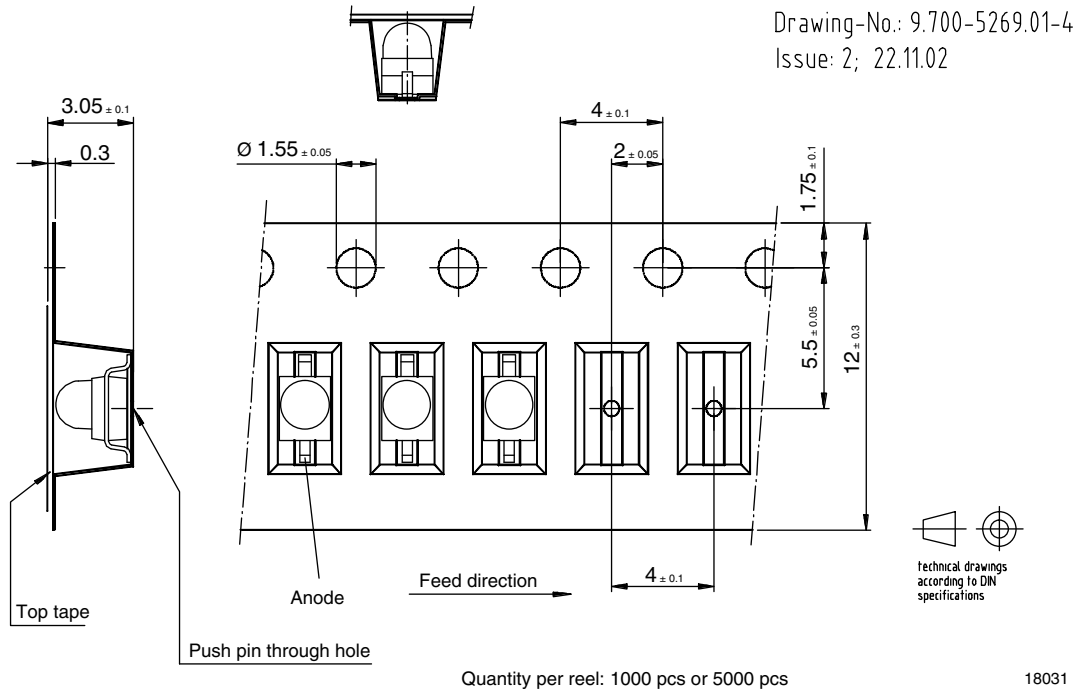


Quantity per reel: 1000 pcs or 5000 pcs

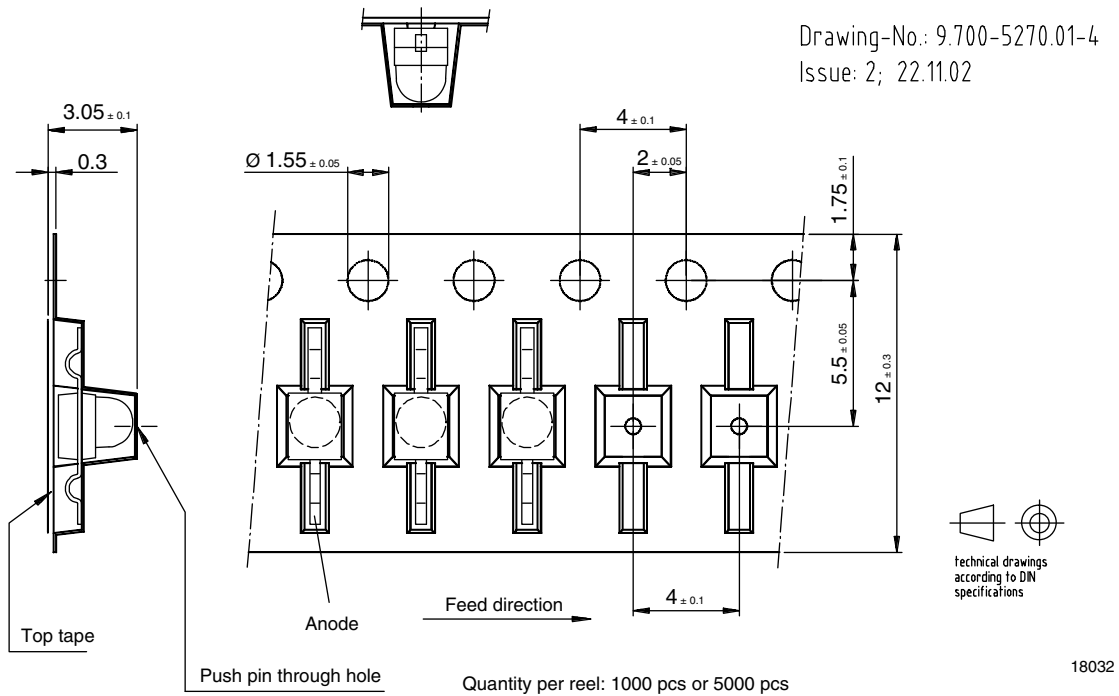
18030



TAPING DIMENSIONS in millimeters: TEMD1020



TAPING DIMENSIONS in millimeters: TEMD1030





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