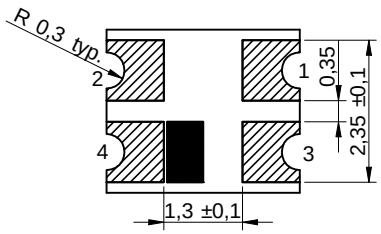
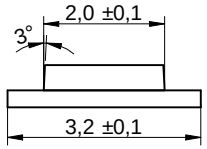
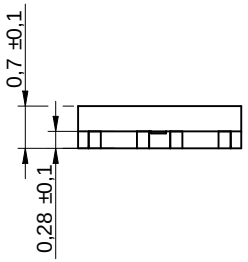
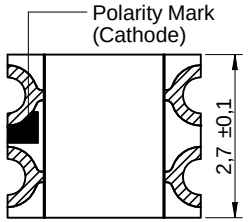
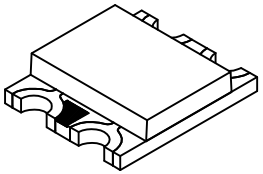
Dimensions: [mm]





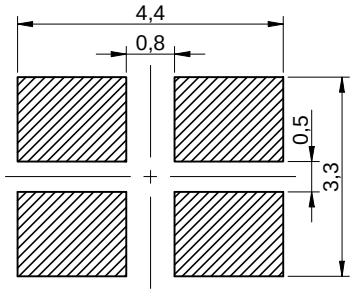






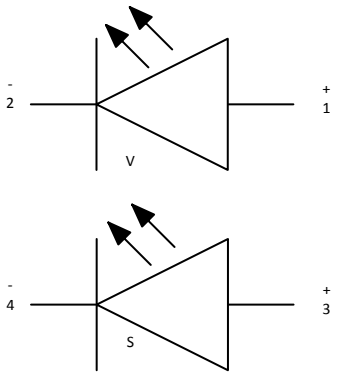
Scale - 8:1

Recommended Land Pattern: [mm]



Scale - 8:1

Schematic:



Absolute Maximum Ratings (Ambient Temperature 25°C):

Properties	Test conditions		Value	Unit
Power Dissipation (Red)		$P_{DISS\ R}$	72	mW
Power Dissipation (Bright Green)		$P_{DISS\ V}$	72	mW
Peak Forward Current	duty/ 10 @ 1 kHz	$I_{F\ Peak}$	100	mA
Continuous Forward Current		I_F	30	mA
Reverse Voltage		V_{REV}	5	V
ESD Threshold/ Human Body Model		$V_{ESD\ HBM}$	2000	V

Optical Properties:

Chip Technology	AlInGaP
Emitting Color	Super Red & Bright Green
Lens Type	Waterclear

General Information:

Operating Temperature	-40 °C up to +85 °C	
Storage Temperature (in original packaging)	-40 °C up to +85 °C	
Moisture Sensitive Level	MSL	3

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WÜRTH ELEKTRONIK

CREATED	CHECKED	GENERAL TOLERANCE	PROJECTION METHOD
SSt	HOe	DIN ISO 2768-1m	

DESCRIPTION
WL-SBCW SMD Bi-color Chip LED Waterclear

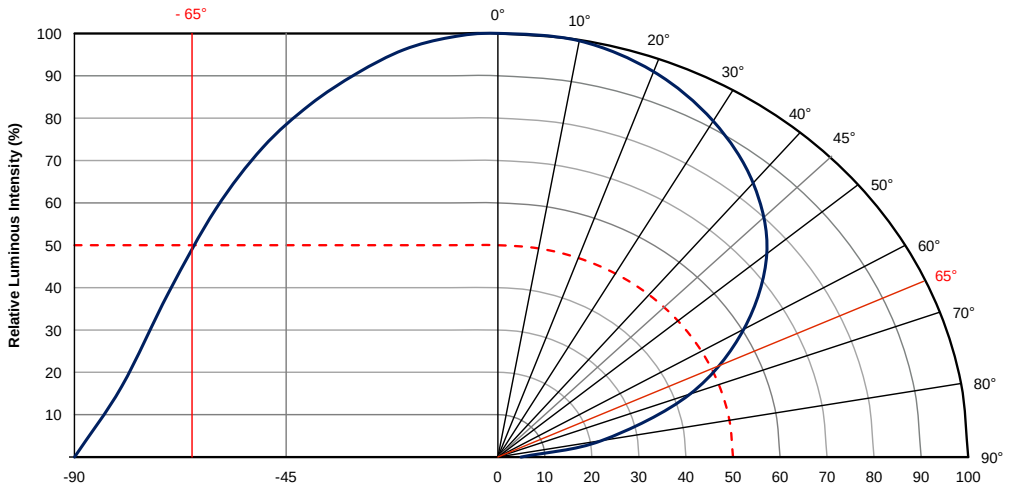
ORDER CODE
150121SV74000

SIZE	REVISION	STATUS	DATE (YYYY-MM-DD)	BUSINESS UNIT	PAGE
1210	001.001	Draft	2015-11-10	eiPal	1/7

Electrical & Optical Properties:

Properties	Test conditions		Value			Unit	Tol.
			min.	typ.	max.		
Peak Wavelength (Super Red)	20 mA	$\lambda_{Peak\ S}$		645		nm	typ.
Dominant Wavelength (Super Red)	20 mA	$\lambda_{Dom\ S}$		630		nm	typ.
Luminous Intensity (Super Red)	20 mA	$I_{V\ S}$	30	55		mcd	
Forward Voltage (Super Red)	20 mA	$V_{F\ S}$		2	2.4	V	
Spectral Bandwidth (Super Red)	20 mA	$\Delta\lambda$ S		20		nm	
Peak Wavelength (Bright Green)	20 mA	$\lambda_{Peak\ V}$		572		nm	typ.
Dominant Wavelength (Bright Green)	20 mA	$\lambda_{Dom\ V}$		570		nm	typ.
Luminous Intensity (Bright Green)	20 mA	$I_{V\ V}$	18	30		mcd	
Forward Voltage (Bright Green)	20 mA	$V_{F\ V}$		2	2.4	V	
Spectral Bandwidth (Bright Green)	20 mA	$\Delta\lambda$ V		15		nm	typ.
Reverse Current	5 V	I_{REV}			10	µA	
Viewing Angle	20 mA	$2\theta_{50\%}$		130		°	

Viewing Angle:



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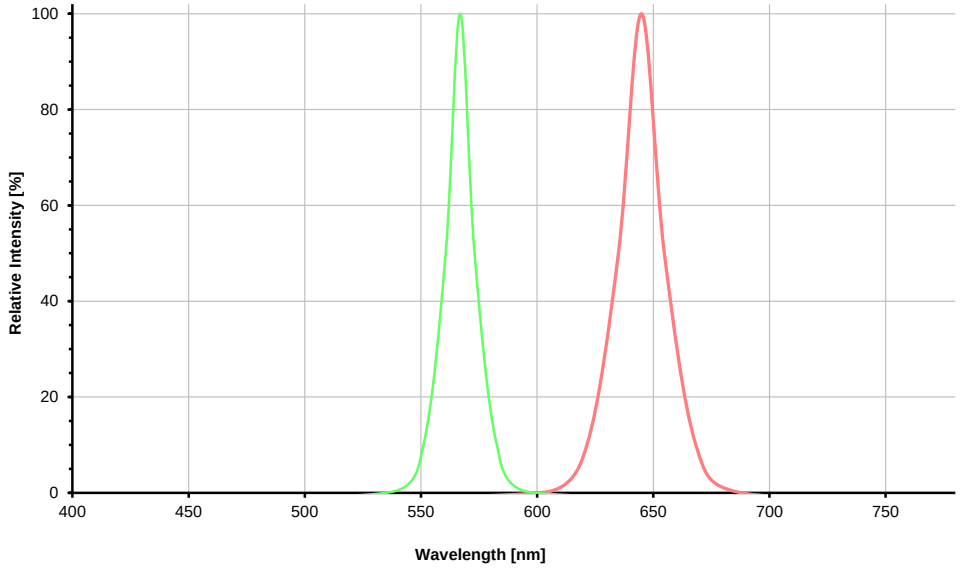
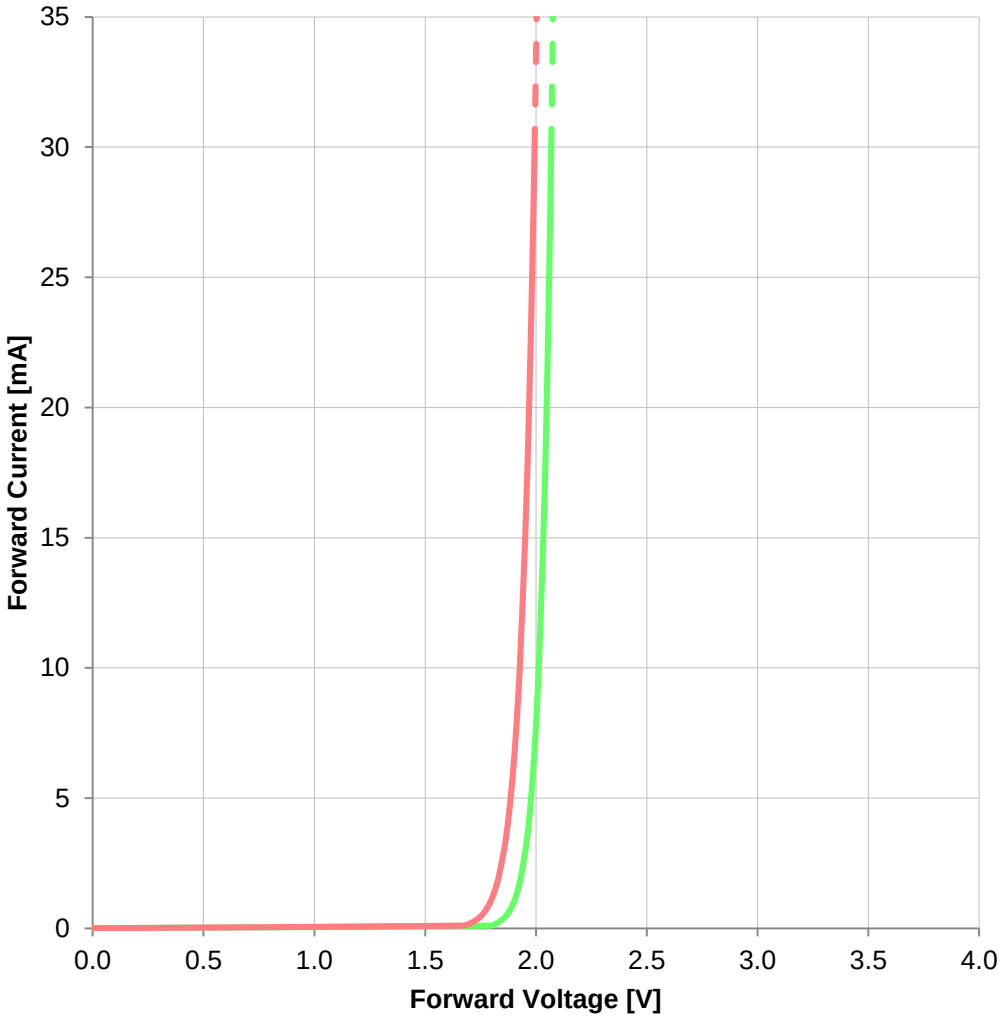
1210	001.001	Draft	2015-11-10	eiPal	2/7

Spectral:



Forward Current vs. Forward Voltage:



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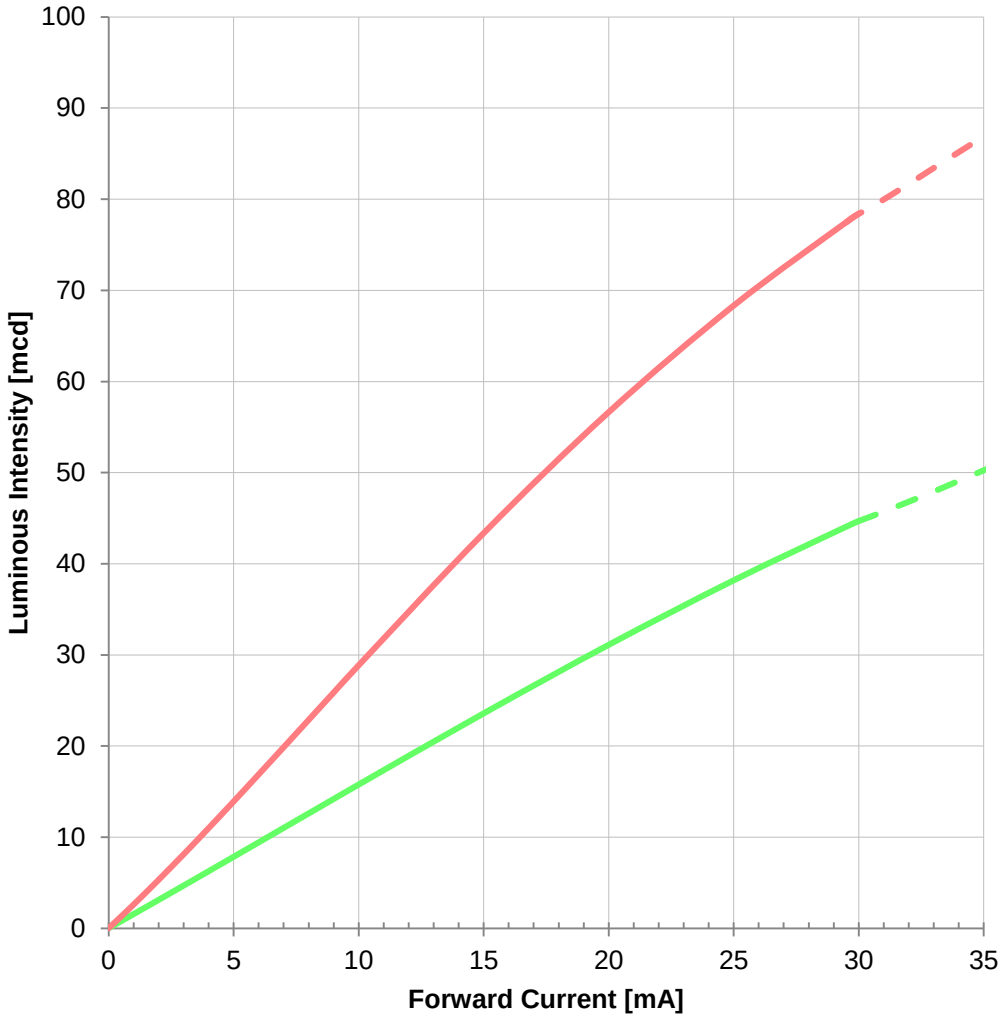
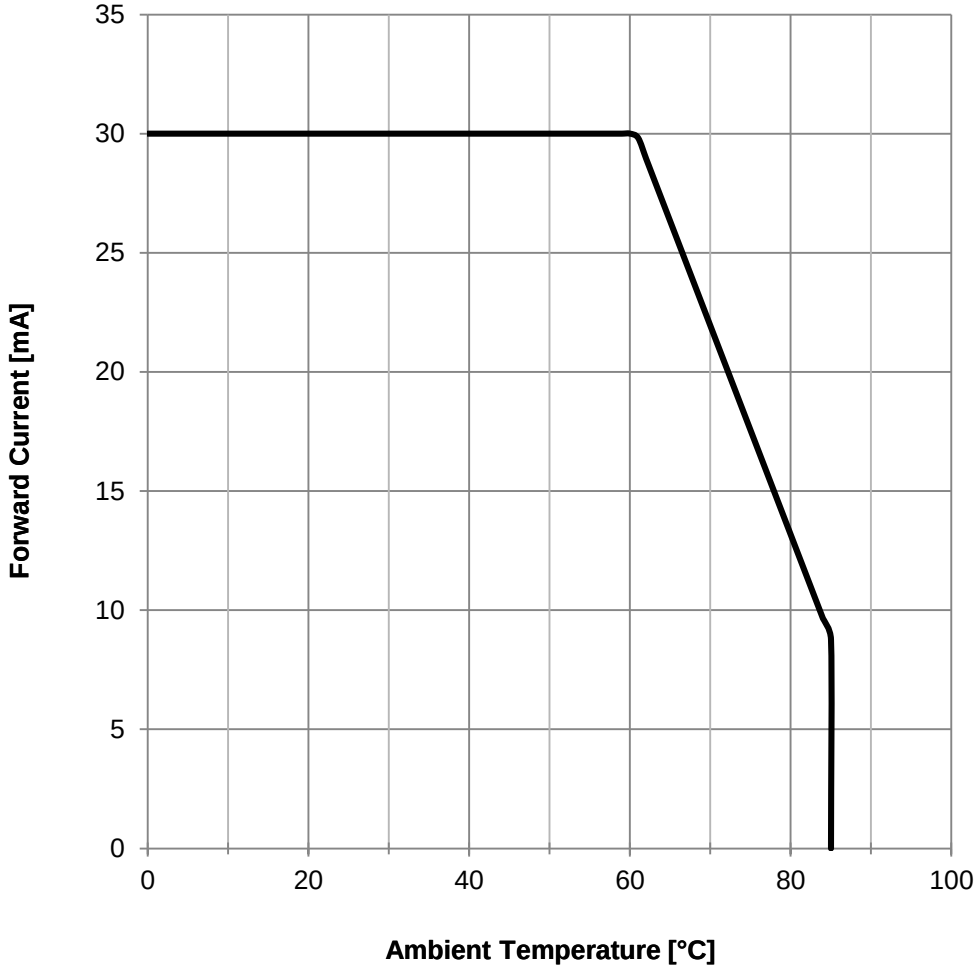
1210	001.001	Draft	2015-11-10	eiPal	3/7

Luminous Intensity vs. Forward Current:



Derating Curve:



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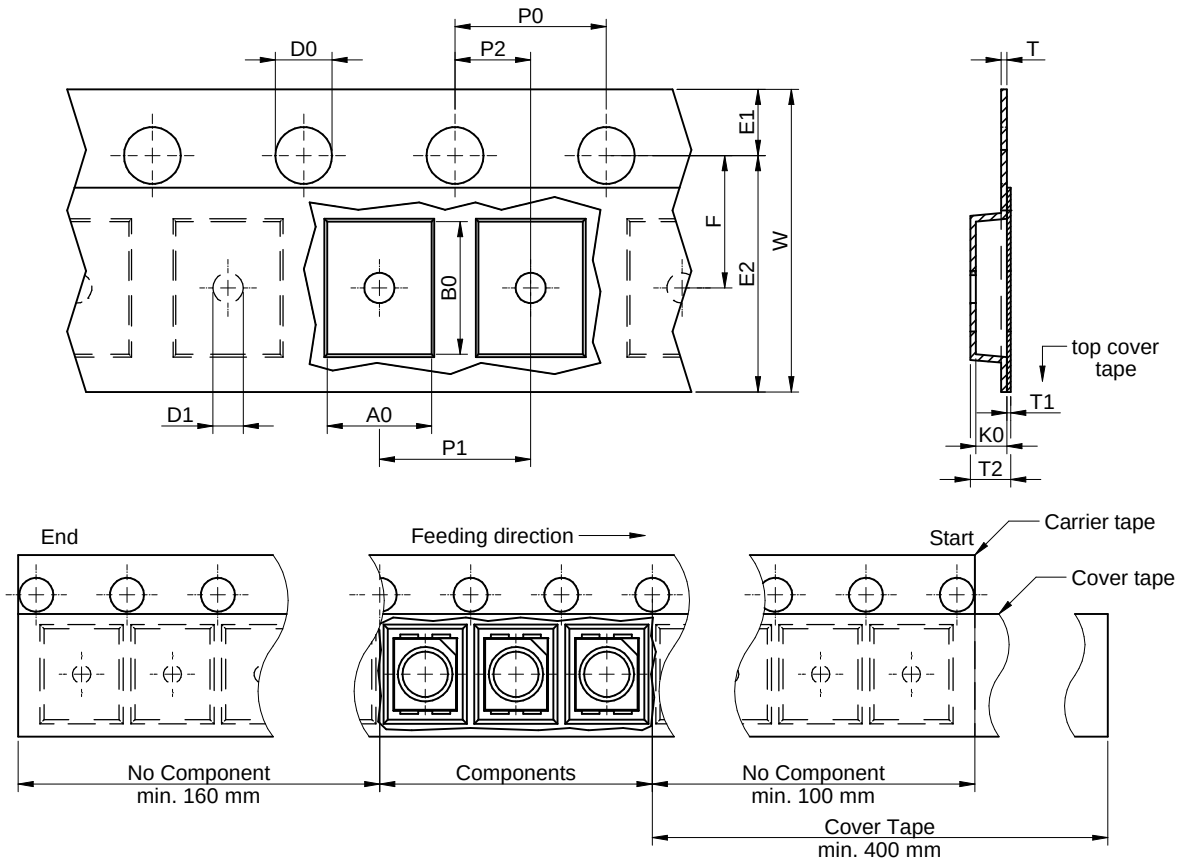
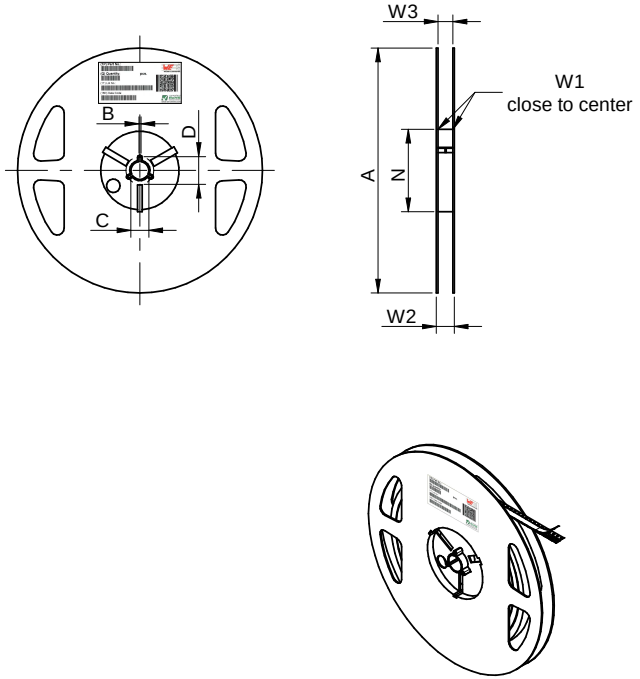
1210	001.001	Draft	2015-11-10	eiPal	4/7

Packaging Specification - Tape and Reel: [mm]

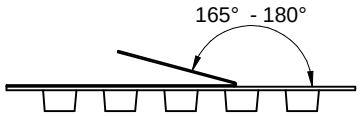




packaging is reffered to the international standard IEC 60286-3:2013

tolerance		typ.	typ.	+0,3/ -0,1	max.	max.	typ.	typ.	±0,1	±0,1	± 0.05	+0,1/ -0,0	min.	±0,1	min.	± 0.05		pcs.
size	1210	2.79	3.51	8.00	0.60	0.10	1.36	1.07	4.00	4.00	2.00	1.50	0.30	1.75	6.25	3.50	Polycarbonate	3000

		A	B	C	D	N	W1	W2	W3	W3
tolerance		± 2,0	min.	min.	min.	min.	+1,5	max.	min.	max.
Tape width	8 mm	178	1.5	12.8	20.2	50	8.4	14.4	7.9	10.9



		Pull-of force
Tape width	8 mm	0,1 N - 1,0 N

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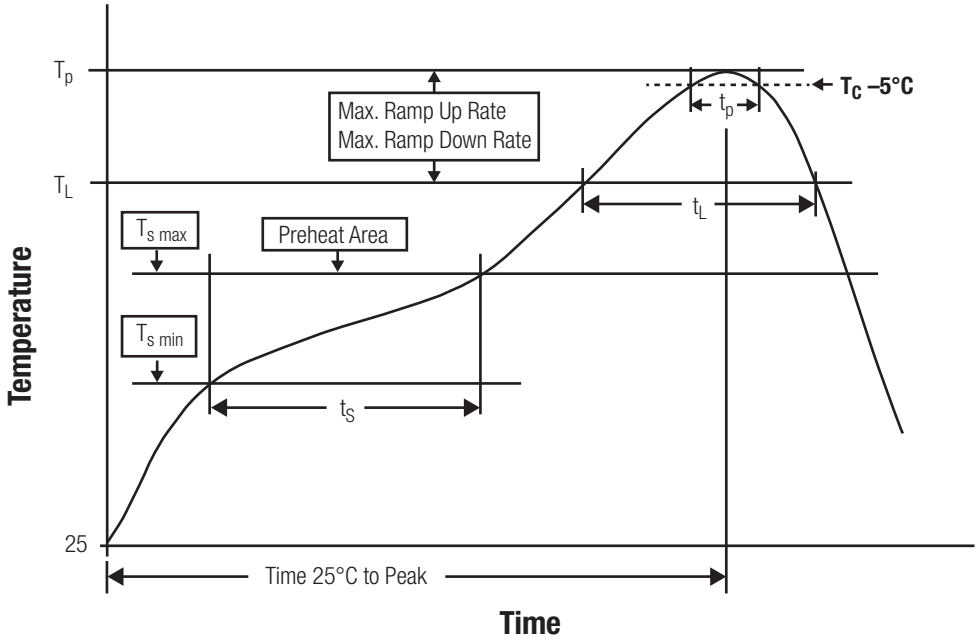
Classification Reflow Profile for SMT components:



Classification Reflow Soldering Profile:

Profile Feature		Value
Preheat Temperature Min	$T_{s\ min}$	150 °C
Preheat Temperature Max	$T_{s\ max}$	200 °C
Preheat Time t_s from $T_{s\ min}$ to $T_{s\ max}$	t_s	max. 60 - 120 seconds
Ramp-up Rate (T_L to T_P)		3 °C/ second max.
Liquidous Temperature	T_L	217 °C
Time t_L maintained above T_L	t_L	max. 60 seconds
Peak package body temperature	T_p	see table
Time within 5°C of actual peak temperaure	t_p	max. 10 seconds
Ramp-down Rate (T_L to T_P)		6 °C/ second max.
Time 25°C to peak temperature		max. 220 seconds

refer to IPC/ JEDEC J-STD-020E

Package Classification Reflow Temperature:

Properties	Volume mm³ <350	Volume mm³ 350-2000	Volume mm³ >2000
PB-Free Assembly I Package Thickness < 1.6 mm	260 °C	260 °C	260 °C
PB-Free Assembly I Package Thickness 1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
PB-Free Assembly I Package Thickness ≥ 2.5 mm	250 °C	245 °C	245 °C
Applied cycles	2 cycles max.		

refer to IPC/ JEDEC J-STD-020E

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Important Notes

The following conditions apply to all goods within the product range of Würth Elektronik eiSos GmbH & Co. KG:

1. General Customer Responsibility

Some goods within the product range of Würth Elektronik eiSos GmbH & Co. KG contain statements regarding general suitability for certain application areas. These statements about suitability are based on our knowledge and experience of typical requirements concerning the areas, serve as general guidance and cannot be estimated as binding statements about the suitability for a customer application. The responsibility for the applicability and use in a particular customer design is always solely within the authority of the customer. Due to this fact it is up to the customer to evaluate, where appropriate to investigate and decide whether the device with the specific product characteristics described in the product specification is valid and suitable for the respective customer application or not.

2. Customer Responsibility related to Specific, in particular Safety-Relevant Applications

It has to be clearly pointed out that the possibility of a malfunction of electronic components or failure before the end of the usual lifetime cannot be completely eliminated in the current state of the art, even if the products are operated within the range of the specifications.
In certain customer applications requiring a very high level of safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health it must be ensured by most advanced technological aid of suitable design of the customer application that no injury or damage is caused to third parties in the event of malfunction or failure of an electronic component. Therefore, customer is cautioned to verify that data sheets are current before placing orders. The current data sheets can be downloaded at www.we-online.com.

3. Best Care and Attention

Any product-specific notes, cautions and warnings must be strictly observed. Any disregard will result in the loss of warranty.

4. Customer Support for Product Specifications

Some products within the product range may contain substances which are subject to restrictions in certain jurisdictions in order to serve specific technical requirements. Necessary information is available on request. In this case the field sales engineer or the internal sales person in charge should be contacted who will be happy to support in this matter.

5. Product R&D

Due to constant product improvement product specifications may change from time to time. As a standard reporting procedure of the Product Change Notification (PCN) according to the JEDEC-Standard inform about minor and major changes. In case of further queries regarding the PCN, the field sales engineer or the internal sales person in charge should be contacted. The basic responsibility of the customer as per Section 1 and 2 remains unaffected.

6. Product Life Cycle

Due to technical progress and economical evaluation we also reserve the right to discontinue production and delivery of products. As a standard reporting procedure of the Product Termination Notification (PTN) according to the JEDEC-Standard we will inform at an early stage about inevitable product discontinuance. According to this we cannot guarantee that all products within our product range will always be available. Therefore it needs to be verified with the field sales engineer or the internal sales person in charge about the current product availability expectancy before or when the product for application design-in disposal is considered. The approach named above does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.

7. Property Rights

All the rights for contractual products produced by Würth Elektronik eiSos GmbH & Co. KG on the basis of ideas, development contracts as well as models or templates that are subject to copyright, patent or commercial protection supplied to the customer will remain with Würth Elektronik eiSos GmbH & Co. KG. Würth Elektronik eiSos GmbH & Co. KG does not warrant or represent that any license, either expressed or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right relating to any combination, application, or process in which Würth Elektronik eiSos GmbH & Co. KG components or services are used.

8. General Terms and Conditions

Unless otherwise agreed in individual contracts, all orders are subject to the current version of the “General Terms and Conditions of Würth Elektronik eiSos Group”, last version available at www.we-online.com.

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