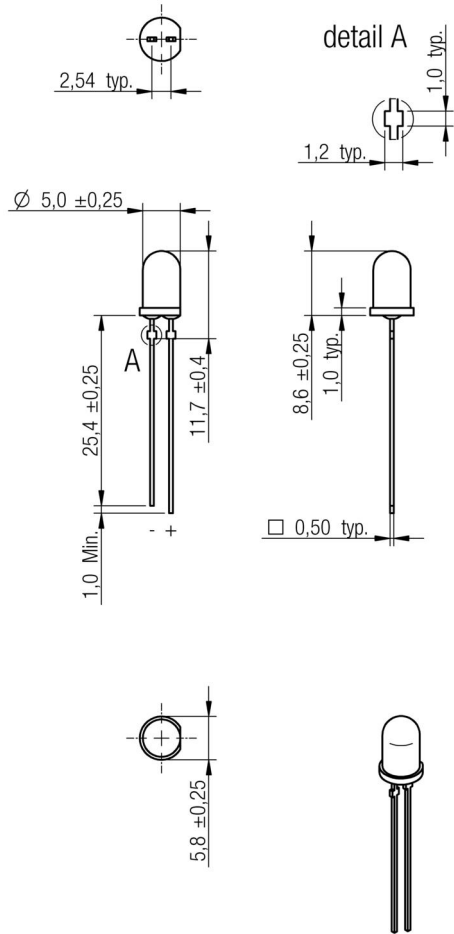
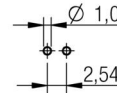


A Dimensions: [mm]

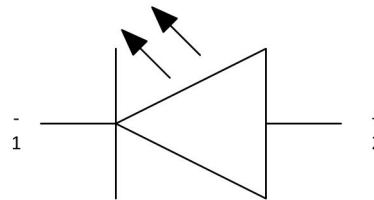


B Recommended hole pattern: [mm]



Scale - 1:1

C Schematic:



Scale - 1:1



D Absolute Maximum Ratings (Ambient Temperature 25°C):

Properties	Test conditions		Value	Unit
Power dissipation		P _{Diss}	85	mW
Peak Forward Current	duty/10@1kHz	I _{F Peak}	100	mA
Continuous Forward Current		I _F	30	mA
Reverse Voltage		V _{Rev}	5	V
ESD Threshold/ Human Body Modell		V _{ESD HBM}	1000	V

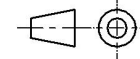
E General information:

- Operating temperature: -40°C to +85°C
- Storage temperature (on tape & reel): -40°C to +85°C; 60% RH max.

Optical Properties:

Properties	Value
Chip Technology	GaAsP/GaP
Emitting Color	Red
Lens Type	Color diffused

Projection



DESCRIPTION

WL-TMRC THT LED mono-color round color lens

Order.- No.

151051RS11000

Size: 5 mm



SIZE

A4

Würth Elektronik eiSos GmbH & Co. KG
EMC & Inductive Solutions
Max-Eyth-Str. 1
74638 Waldenburg
Germany
Tel. +49 (0) 79 42 945 - 0
www.we-online.com
eiSos@we-online.com

REV	DATE	BY	CHECKED
1.2	2013-04-10	SSt	SSt
1.1	2012-12-10	SSt	SSt
1.0	2011-09-01	SSt	PLD



D Electrical & Optical Properties:

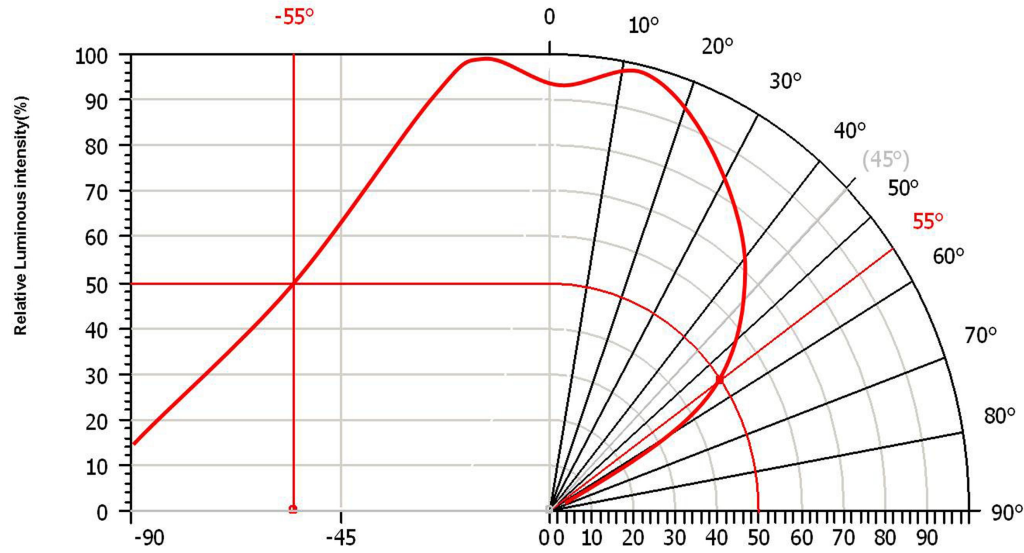
Properties	Test conditions		Value			Unit
			min.	typ.	max.	
Peak Wavelength	20 mA	λ_{Peak}		640		nm
Dominant wavelength	20 mA	λ_{Dom}		630		nm
Luminous Intensity	20 mA	I_V	-	15		mcd
Forward voltage	20 mA	V_F		2.1	2.8	V
Spectral Bandwidth	20 mA	$\Delta\lambda$		40		nm
Reverse Current	5 V	I_{Rev}			100	μA
Viewing angle	20 mA	$2\theta_{50\%}$		110		°

				Projection 		DESCRIPTION		
						WL-TMRC THT LED mono-color round color lens		
				Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com		Order.- No.	SIZE	
1.2	2013-04-10	SSt	SSt			151051RS11000	COMPLIANT RoHS&REACH HALOGENFREE	A4
1.1	2012-12-10	SSt	SSt					
1.0	2011-09-01	SSt	PLD					
REV	DATE	BY	CHECKED			Size: 5 mm		

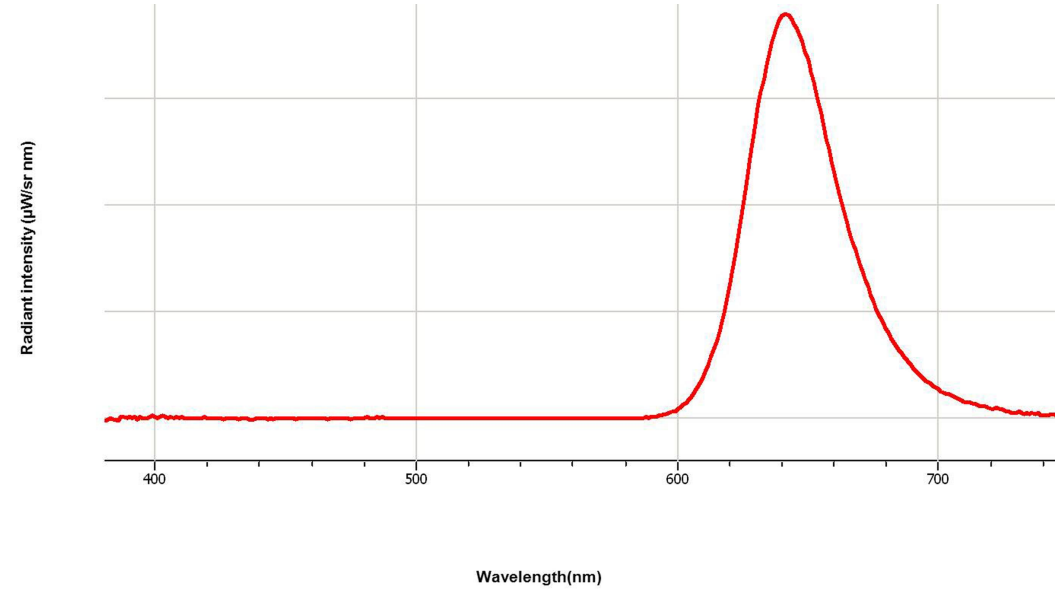
This electronic component has been designed and developed for usage in general electronic equipment only. This product is not authorized for use in equipment where a higher safety standard and reliability standard is especially required or where a failure of the product is reasonably expected to cause severe personal injury or death, unless the parties have executed an agreement specifically governing such use. Moreover Würth Elektronik eiSos GmbH & Co KG products are neither designed nor intended for use in areas such as military, aerospace, aviation, nuclear control, submarine, transportation (automotive control, train control, ship control), transportation signal, disaster prevention, medical, public information network etc.. Würth Elektronik eiSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability evaluation checks for safety must be performed on every electronic component which is used in electrical circuits that require high safety and reliability functions or performance.



F Viewing Angle:



F Spectral:

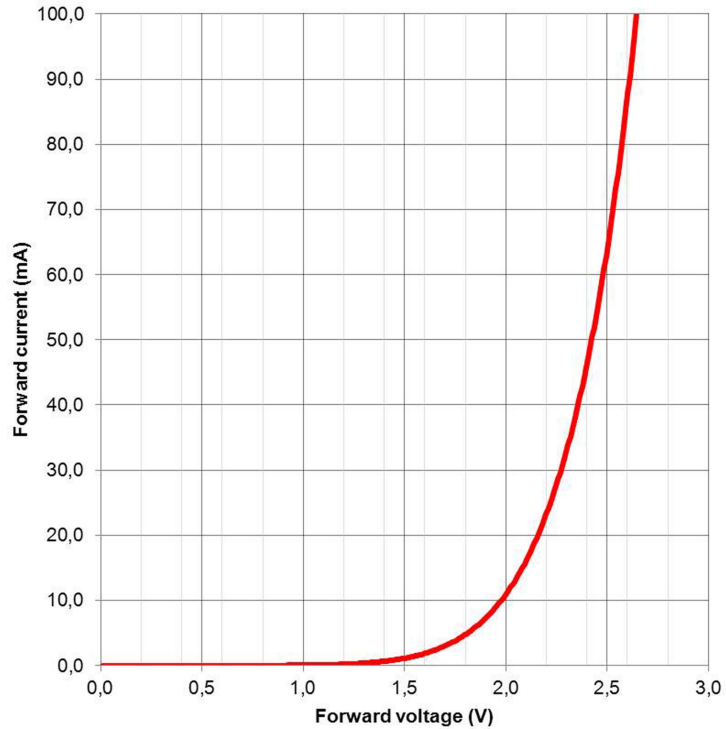


				Projection 		DESCRIPTION		
						WL-TMRC THT LED mono-color round color lens		
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1.1	2012-12-10	SSt	SSt					
1.0	2011-09-01	SSt	PLD					
REV	DATE	BY	CHECKED			Size: 5 mm		

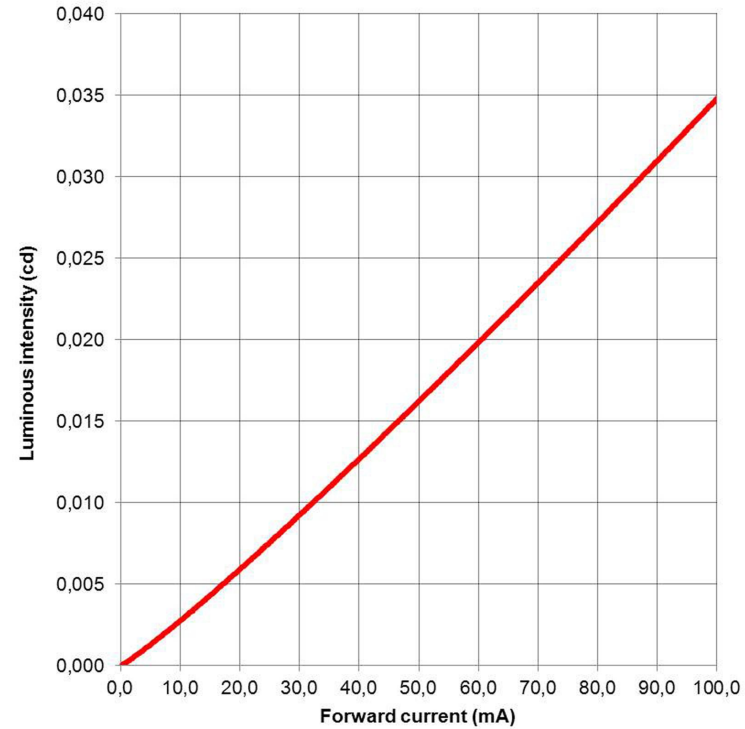
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F Forward Current vs. Forward Voltage:



F Luminous Intensity vs. Forward Current:

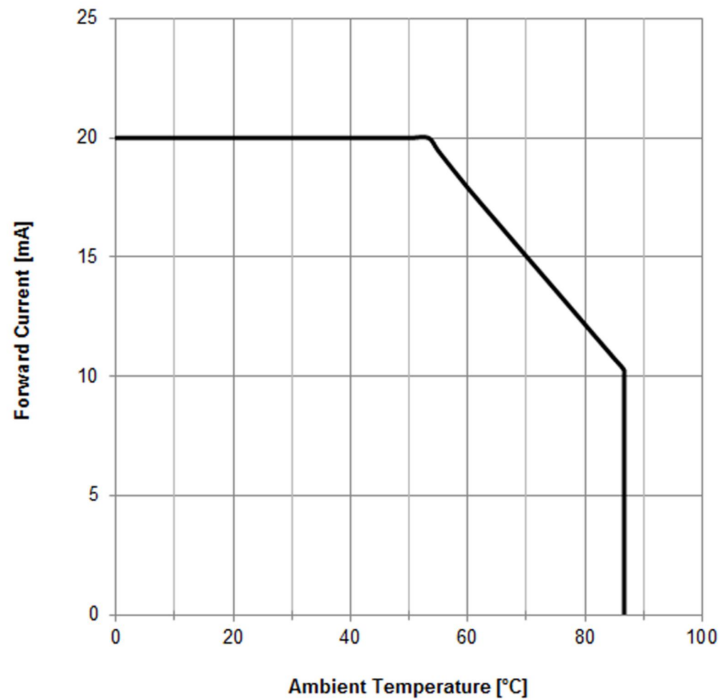


				Projection 		DESCRIPTION	
						WL-TMRC THT LED mono-color round color lens	
				Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com		Order.- No. 151051RS11000	
1.2	2013-04-10	SSt	SSt			COMPLIANT RoHS&REACH HALOGENFREE	SIZE
1.1	2012-12-10	SSt	SSt				A4
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F Derating Curve:



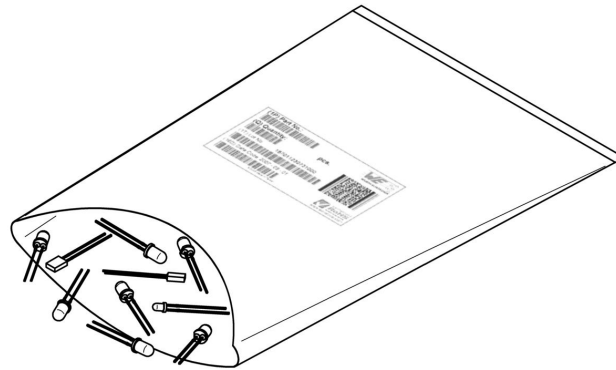
				Projection 		DESCRIPTION		
						WL-TMRC THT LED mono-color round color lens		
				Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com		Order.- No.	SIZE	
1.2	2013-04-10	SSt	SSt			151051RS11000		A4
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G Packaging Specification: [mm]



	size	Packaging Type	Packaging Unit
	151031xx	Bulk	500
	151032xx	Bulk	500
	151033xxx	Bulk	500
	151051xx	Bulk	250
	151052xx	Bulk	250
	151053xxx	Bulk	500



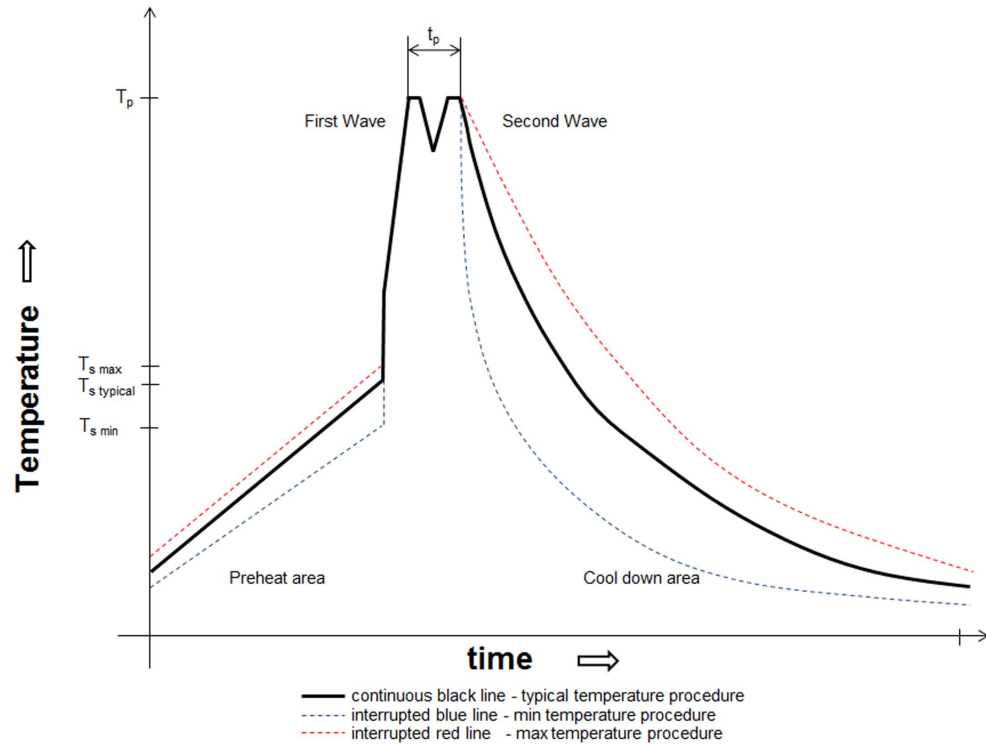
				Projection		DESCRIPTION	
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				Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	Order.- No.		SIZE
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H Soldering Specifications:



H1: Classification Wave Soldering Profile:



H2: Classification Wave Profile

Profile Feature	Pb-Free Assembly	Sn-Pb Assembly
Preheat - Temperature Min ($T_{s\ min}$) - Temperature Typical ($T_{s\ typical}$) - Temperature Max ($T_{s\ max}$) - Time (t_p) from ($T_{s\ min}$ to $T_{s\ max}$)	100°C 120°C 130°C 70 seconds	100°C 120°C 130°C 70 seconds
Δ preheat to max Temperature	150°C max.	150°C max.
Peak temperature (T_p)	245°C - 260°C	235°C - 260°C
Time of actual peak temperature (t_p)	5-8 seconds max.	3-6 seconds max.
Ramp-down rate - Min - Typical - Max	~ 2 K/s ~ 3.5 K/s ~ 5 K/s	~ 2 K/s ~ 3.5 K/s ~ 5 K/s
Time 25°C to 25°C	4 minutes	4 minutes
Applied cycles	1 cycle max.	1 cycle max.

				Projection 		DESCRIPTION	
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J 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.

				Projection 		DESCRIPTION	
						WL-TMRC THT LED mono-color round color lens	
						Order.- No.	SIZE
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1.1	2012-12-10	SSt	SSt				
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