

Reference Voltage LEDs in \varnothing 3 mm Package

Color	Type	Technology	Voltage Range V
Red	TRLR3160	GaAsP on GaAs	1.5 to 1.7
Green	TRLG3210	GaP on GaP	1.9 to 2.3

Features

- Standard \varnothing 3 mm (T-1) package
- Low temperature coefficient of V_F

Absolute Maximum Ratings

$T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified

TRLR3160 ,TRLG3210 ,

Parameter	Test Conditions	Type	Symbol	Value	Unit
Reverse voltage			V_R	6	V
DC forward current		TRLR3160	I_F	50	mA
		TRLG3210	I_F	30	mA
Surge forward current	$t_p \leq 10 \mu\text{s}$		I_{FSM}	1	A
Power dissipation	$T_{amb} \leq 60^{\circ}\text{C}$		P_V	100	mW
Junction temperature			T_j	100	$^{\circ}\text{C}$
Storage temperature range			T_{stg}	-55 to +100	$^{\circ}\text{C}$
Soldering temperature	$t \leq 5 \text{ s}$, 2 mm from body		T_{sd}	260	$^{\circ}\text{C}$
Thermal resistance junction/ambient			R_{thJA}	400	K/W

Optical and Electrical Characteristics

T_{amb} = 25°C, unless otherwise specified

Red (TRLR3160)

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I _F = 5 mA		V _F	1.5		1.7	V
Temperature coefficient of V _F	I _F = 5 mA		TK _{V_F}		-0.12		%K
Reverse current	V _R = 6 V		I _R			10	μA
Differential forward resistance	I _F = 5 mA		r _f		10	20	Ω

Green (TRLG3210)

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I _F = 5 mA		V _F	1.9		2.3	V
Temperature coefficient of V _F	I _F = 5 mA		TK _{V_F}		-0.1		%K
Reverse current	V _R = 6 V		I _R			10	μA
Differential forward resistance	I _F = 5 mA		r _f		20	30	Ω

Typical Characteristics ($T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified)

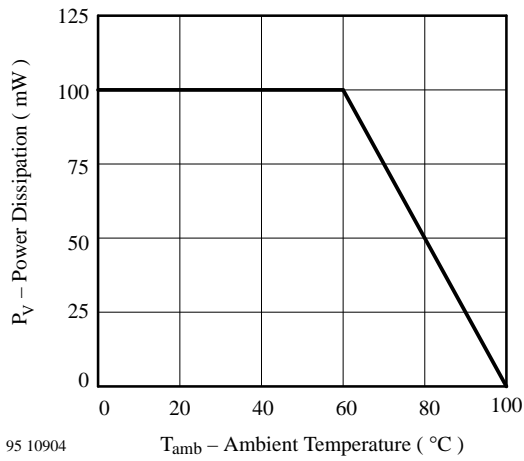


Figure 1. Power Dissipation vs. Ambient Temperature

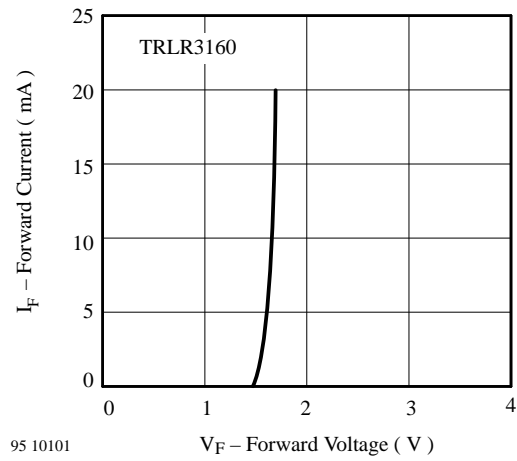


Figure 4. Forward Current vs. Forward Voltage

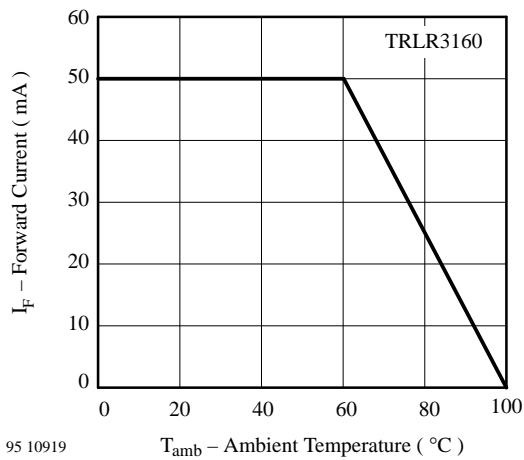


Figure 2. Forward Current vs. Ambient Temperature

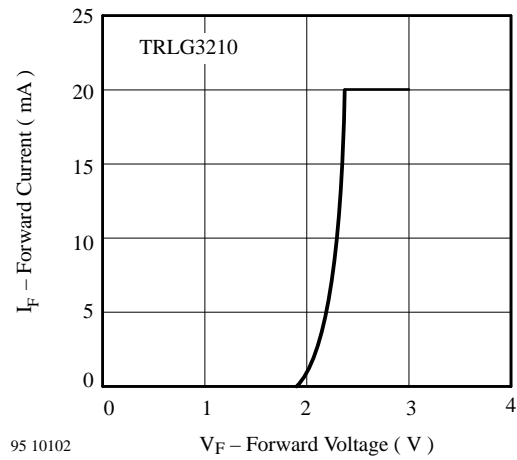


Figure 5. Forward Current vs. Forward Voltage

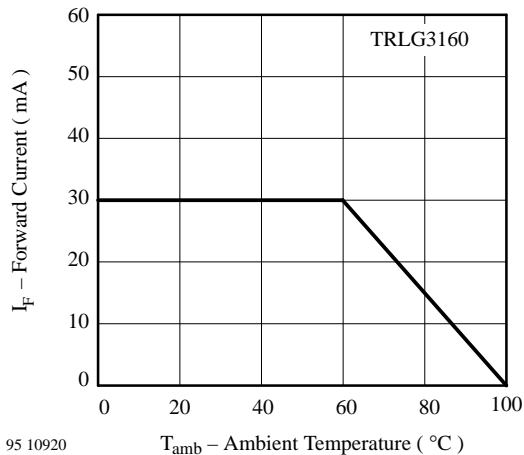


Figure 3. Forward Current vs. Ambient Temperature

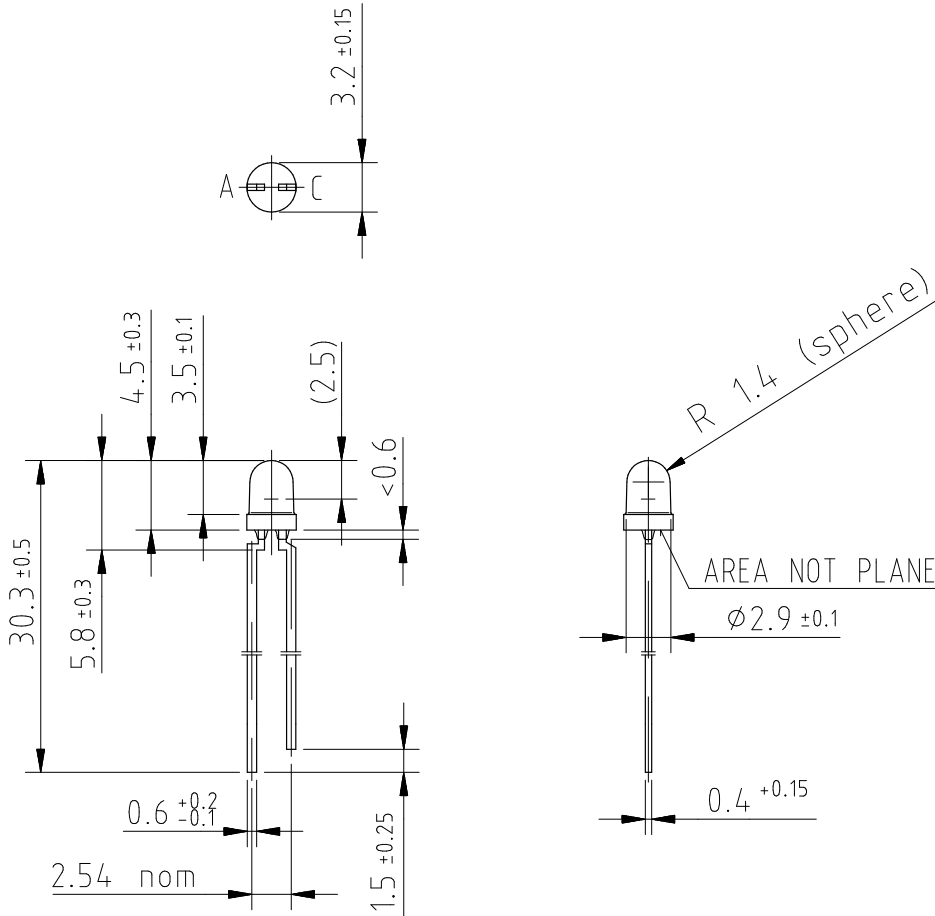
TRLR3160/TRLG3210

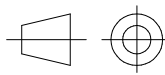
TEMIC

TELEFUNKEN Semiconductors

Dimensions in mm

95 10913




technical drawings
according to DIN
specifications

Ozone Depleting Substances Policy Statement

It is the policy of **TEMIC TELEFUNKEN microelectronic GmbH** to

1. Meet all present and future national and international statutory requirements.
2. Regularly and continuously improve the performance of our products, processes, distribution and operating systems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

TEMIC TELEFUNKEN microelectronic GmbH semiconductor division has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively
2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA
3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

TEMIC can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

We reserve the right to make changes to improve technical design and may do so without further notice.

Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer. Should the buyer use TEMIC products for any unintended or unauthorized application, the buyer shall indemnify TEMIC against all claims, costs, damages, and expenses, arising out of, directly or indirectly, any claim of personal damage, injury or death associated with such unintended or unauthorized use.

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