



# Product Change Notification



Product Group: OPT/Wed Sep 21, 2022/PCN-OPT-1239-2022-REV-0

## Chip change for 5mm green LEDs from GaP to AlInGaP.

**DESCRIPTION OF CHANGE:** The phasing out GaP technology chip will be replaced by the state-of-the-art AlInGaP chip technology.

**REASON FOR CHANGE:** Discontinuation of GaP process

**EXPECTED INFLUENCE ON QUALITY/RELIABILITY/PERFORMANCE:** Improved degradation behavior, higher brightness allows lower driving current.

**PART NUMBERS/SERIES/FAMILIES AFFECTED:** Please see materials list on the succeeding page.

**VISHAY BRAND(s):** Vishay Semiconductors

**TIME SCHEDULE:**

Start Shipment Date: Wed Feb 1, 2023

**SAMPLE AVAILABILITY:** Oct 17, 2022

**PRODUCT IDENTIFICATION:** New device names: TLHG5420\*, TLHG6420\*, TLLG5420\*

**QUALIFICATION DATA:** Available on request.

**This PCN is considered approved, without further notification, unless we receive specific customer concerns before Tue Nov 1, 2022 or as specified by contract.**

**ISSUED BY:** Harald Lunt, led@vishay.com

**For further information, please contact your regional Vishay office.**

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ONE OF THE WORLD'S LARGEST MANUFACTURERS OF DISCRETE SEMICONDUCTORS AND PASSIVE COMPONENT



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TLHG5400	TLHG5400-AS12Z	TLHG5401	TLHG5405	TLHG5405-KSZ
TLHG6400	TLHG6400-AS12Z	TLHG6400-CS12Z	TLHG6401	TLHG6405
TLHG6405-ASZ	TLLG5400	TLLG5401		

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**Chip change for 5mm green LEDs from GaP to AlInGaP**

Change	OLD	NEW
Chip Technology	GaP / GaP	AlInGaP / GaAs
Chip Size in $\mu\text{m}$	260 x 260 x 250	163 x 163 x 193
<b>Maximum Ratings</b>		
Reverse Voltage	6V	5V
DC Forward Current	30mA	25mA
Peak Forward Current	1A	60mA
Power Dissipation	100mW	60mW
Operating Temperature	-40°C to +100°C	-40°C to +85°C
Storage Temperature	-55°C to +100°C	-40°C to +100°C

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## Chip change for 5mm green LEDs from GaP to AlInGaP

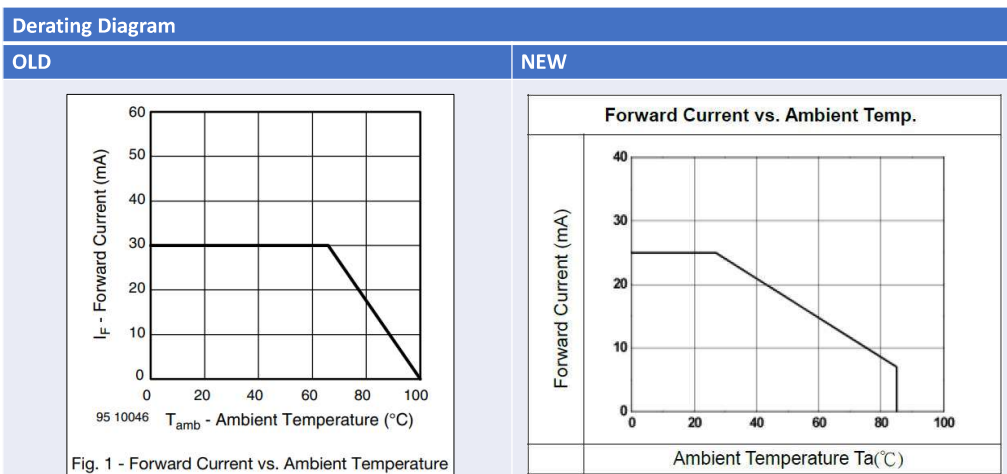
Optical and Electrical Characteristics (T <sub>amb</sub> = 25°C, unless otherwise specified)										
Change	OLD					NEW				
	Type	Min.	Typ.	Max.	@I <sub>F</sub> or V <sub>R</sub>	Type	Min.	Typ.	Max.	@I <sub>F</sub> or V <sub>R</sub>
Luminous Intensity	TLHG5400 TLHG6400	1.6 mcd	10 mcd	---	10 mA	TLHG5420 TLHG6420	6.3 mcd	20 mcd	---	10 mA
	TLHG5401 TLHG6401	4 mcd	12 mcd	---						
	TLHG5405 TLHG6405	6.3 mcd	15 mcd	---						
	TLHG5400 TLHG6400	0.63 mcd	1.2 mcd	---	2 mA	TLLG5420	1 mcd	3.5 mcd	---	2 mA
	TLHG5401 TLHG6401	1 mcd	2 mcd	---						
	Forward Voltage	TLHG54.. TLHG64..	---	2.4 V	3 V	20 mA	TLHG5420 TLHG6420	---	2 V	2.4 V
TLHG54.. TLHG64..		---	1.9 V	2.4 V	2 mA	TLLG5420	---	1.8 V	2.2 V	2 mA
TLHG54.. TLHG64.. TLLG54..		---	---	10 μA	6 V	TLLG5420	---	---	10 μA	5 V

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## Chip change for 5mm green LEDs from GaP to AlInGaP



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## Visual Appearance



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## Change of Device Names

OLD	NEW
TLHG5400	TLHG5420
TLHG5401	
TLHG5405	TLHG5420-ASZ
TLHG5400-AS12Z	
TLHG5405-KSZ	TLHG5420-KSZ
TLHG6400	TLHG6420
TLHG6401	
TLHG6405	TLHG6420-ASZ
TLHG6400-AS12Z	
TLHG6405-ASZ	TLHG6420-CSZ
TLHG6400-CS12Z	
TLLG5400	TLLG5420
TLLG5401	

selection types (.01, .05) make no more sense, because the lower bins would have no yield

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