

阅读申明

- 1.本站收集的数据手册和产品资料都来自互联网，版权归原作者所有。如读者和版权方有任何异议请及时告之，我们将妥善解决。
- 2.本站提供的中文数据手册是英文数据手册的中文翻译，其目的是协助用户阅读，该译文无法自动跟随原稿更新，同时也可能存在翻译上的不当。建议读者以英文原稿为参考以便获得更精准的信息。
- 3.本站提供的产品资料，来自厂商的技术支持或者使用者的心得体会等，其内容可能存在描述上的差异，建议读者做出适当判断。
- 4.如需与我们联系，请发邮件到marketing@iczoom.com，主题请标有“数据手册”字样。

Read Statement

1. The datasheets and other product information on the site are all from network reference or other public materials, and the copyright belongs to the original author and original published source. If readers and copyright owners have any objections, please contact us and we will deal with it in a timely manner.
2. The Chinese datasheets provided on the website is a Chinese translation of the English datasheets. Its purpose is for reader's learning exchange only and do not involve commercial purposes. The translation cannot be automatically updated with the original manuscript, and there may also be improper translations. Readers are advised to use the English manuscript as a reference for more accurate information.
3. All product information provided on the website refer to solutions from manufacturers' technical support or users the contents may have differences in description, and readers are advised to take the original article as the standard.
4. If you have any questions, please contact us at marketing@iczoom.com and mark the subject with "Datasheets" .

High Brightness LED Power Module



DESCRIPTION

VCLPC0303C5, VLPN0303C5 and VLPW0303C5 are high brightness LED modules. Totally 9 pieces 4.4 W multichip power LEDs are soldered on a Cu plate. The Cu plate with a thickness of 2 mm guarantees best heat removal and distribution. VLPC0303C5 is the cool white version in a color temperature range of 5000K to 7000K. VLPN0303C5 is natural white with a color temperature of 3640K to 4240K and VLPW0303C5 is warm white in a color temperature range of 2700K to 3300K. Additional to the modules a suitable LED driver is available.

PRODUCT GROUP AND PACKAGE DATA

- Product group: LED
- Package: LED module
- Product series: power
- Angle of half intensity: $\pm 65^\circ$



FEATURES

- Cu based PCB, 2 mm thickness
- Shiny white surface
- 44 W multichip LED, minimum 2900 lm for cool white, 2600 lm for natural white, and 2100 lm for warm white at 2100 mA each
- ESD withstand voltage: up to 1 kV according to JESD22-A114-B
- Color temperature binning
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

APPLICATIONS

- Internal lighting in buildings
- Tunnel lights
- Reading lamp, table lamp
- General lighting application

PARTS TABLE

PART	COLOR	LUMINOUS FLUX (at $I_F = 2100$ mA typ.)	COLOR TEMPERATURE K	TECHNOLOGY
VLPC0303C5	Cool white	$\Phi_V = 3200$ lm	5000 to 7000	InGaN
VLPN0303C5	Natural white	$\Phi_V = 2950$ lm	3640 to 4240	InGaN
VLPW0303C5	Warm white	$\Phi_V = 2500$ lm	2580 to 3220	InGaN

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25^\circ\text{C}$, unless otherwise specified) VLPC0303C5, VLPN0303C5, VLPW0303C5

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Forward current	$T_{amb} < 80^\circ\text{C}$	I_F	2100	mA
Power dissipation	$T_{amb} < 80^\circ\text{C}$	P_{tot}	44	W
Junction temperature		T_j	115	$^\circ\text{C}$
Operating temperature range		T_{amb}	- 40 to + 80	$^\circ\text{C}$
Storage temperature range		T_{stg}	- 40 to + 100	$^\circ\text{C}$
Decomposition temperature of PCB (for cable assembly)		T_D		$^\circ\text{C}$

OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)
VLPC0303C5, COOL WHITE

PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous flux	$I_F = 2100\text{ mA}$	Φ_V	2900	3200	-	lm
Color temperature	$I_F = 2100\text{ mA}$	CCT	5000	5700	7000	K
Forward voltage	$I_F = 2100\text{ mA}$	V_F	18.0	19.0	21.0	V
Temperature coefficient of V_F	$I_F = 2100\text{ mA}$	TCV_F	-	6.0	-	mV/K
Temperature coefficient of Φ_V	$I_F = 2100\text{ mA}$	$TC\Phi_V$	-	0.18	-	%/K

Note

- Forward voltages are tested at a current pulse duration of 1 ms and a tolerance of $\pm 0.1\text{ V}$. Luminous flux is measured at a current pulse duration of 25 ms and an accuracy of $\pm 11\%$.

OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)
VLPN0303C5, NATURAL WHITE

PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous flux	$I_F = 2100\text{ mA}$	Φ_V	2600	2950	-	lm
Color temperature	$I_F = 2100\text{ mA}$	CCT	3640	4000	4240	K
Forward voltage	$I_F = 2100\text{ mA}$	V_F	18.0	19.0	21.0	V
Temperature coefficient of V_F	$I_F = 2100\text{ mA}$	TCV_F	-	6.0	-	mV/K
Temperature coefficient of Φ_V	$I_F = 2100\text{ mA}$	$TC\Phi_V$	-	0.18	-	%/K

Note

- Forward voltages are tested at a current pulse duration of 1 ms and a tolerance of $\pm 0.1\text{ V}$. Luminous flux is measured at a current pulse duration of 25 ms and an accuracy of $\pm 11\%$.

OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)
VLPW0303C5, WARM WHITE

PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous flux	$I_F = 2100\text{ mA}$	Φ_V	2100	2500	-	lm
Color temperature	$I_F = 2100\text{ mA}$	CCT	2580	3000	3220	K
Forward voltage	$I_F = 2100\text{ mA}$	V_F	18.0	19.0	21.0	V
Temperature coefficient of V_F	$I_F = 2100\text{ mA}$	TCV_F	-	6.0	-	mV/K
Temperature coefficient of Φ_V	$I_F = 2100\text{ mA}$	$TC\Phi_V$	-	0.18	-	%/K

Note

- Forward voltages are tested at a current pulse duration of 1 ms and a tolerance of $\pm 0.1\text{ V}$. Luminous flux is measured at a current pulse duration of 25 ms and an accuracy of $\pm 11\%$.

COLOR BINNING (I_F at 2100 mA)

PART	BIN CODE	CCT (K)
VLPC0303C5	A	5000 to 5500
	B	5500 to 6000
	C	6000 to 6500
	D	6500 to 7000
VLPN0303C5	N	3640 to 3920
	M	3920 to 4240
VLPW0303C5	J	2580 to 2870
	K	2870 to 3220

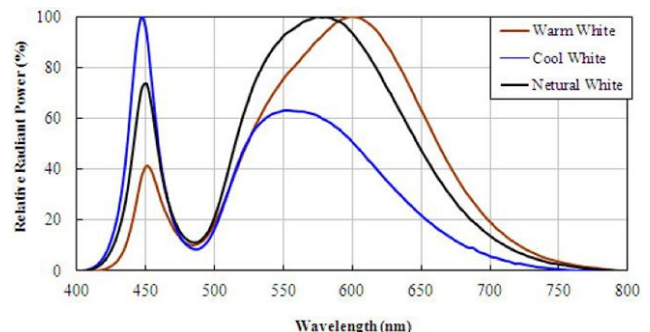


Fig. 1 - Relative Spectrale Emission

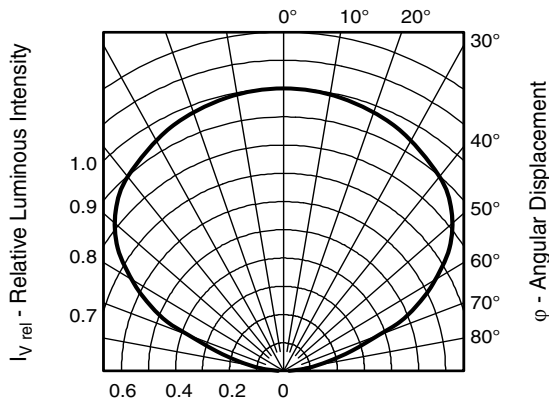


Fig. 2 - Relative Intensity vs. Angular Displacement

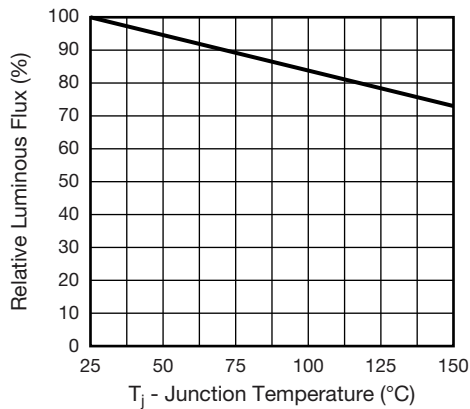


Fig. 3 - Relative Luminous Flux vs. Junction Temperature ($I_F = 3200 \text{ mA}$)

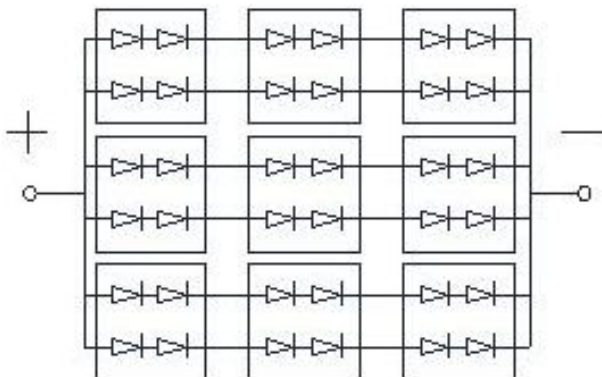
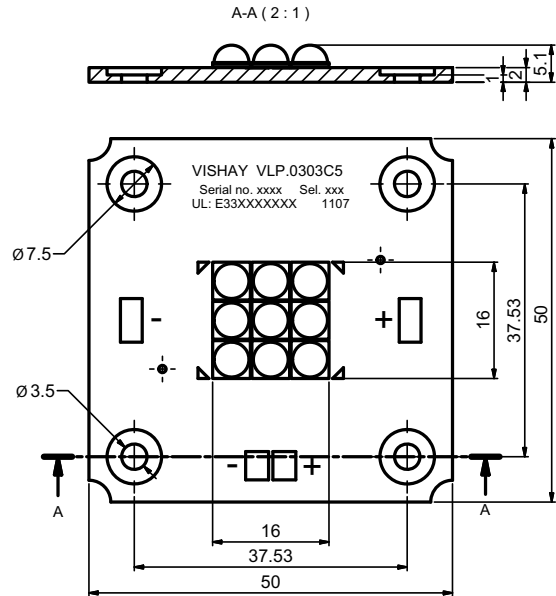
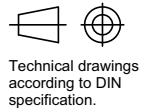


Fig. 4 - Array Circuit Type

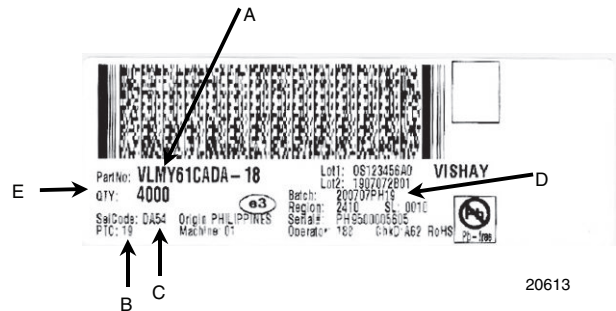
PACKAGE DIMENSIONS in millimeters



Not indicated tolerances ± 0.2
 All dimensions in mm
 Drawing refers to following types: VLP.0303C5
 Drawing-No.: 9.920-6809.01-4
 Issue: prel; 23.04.2012



BAR CODE PRODUCT LABEL



- A. Type of component
- B. Manufacturing plant
- C. SEL - selection code (bin):
X = color group
- D. Batch:
200707 = year 2007, week 07
PH19 = plant code
- E. Total quantity

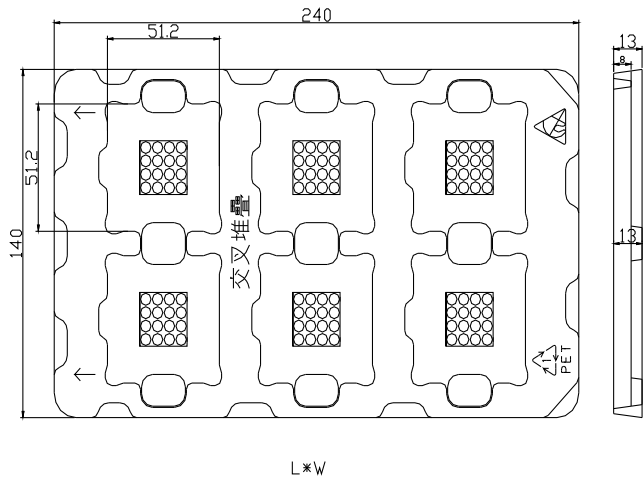


Fig. 5 - 6 Pieces LED Array in One Tray



Fig. 6 - Tray and Box
5 Trays in One Anti-Static Bag, 2 Bags in One Carton,
Contains 60 Pieces LED



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.