

QUALITY
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OS-IN-2019-028

**Implementation of improved operating voltage and
beam divergence for Green Laser Diodes**

Customer Information Package

OS QM CQM ICI | 02.09.2019

Light is OSRAM

OSRAM
Opto Semiconductors

OS-IN-2019-028

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Implementation of improved operating voltage and beam divergence for Green Laser Diodes

1. Background

A) Change of typical operating voltage specifications

Reduce typical operating voltage based on laser diode chip improvement.

B) Change of typical beam divergence angle for parallel (slow axis) and perpendicular (fast axis) to pn-junction

Raise of typical FWHM degree value and improvement of the aspect ratio based upon laser diode chip improvement

Assessement:

No change in fit, form, function and reliability of the Laser

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2. Affected Devices

- Group 1: PLT3 510
PLT5 510
- Group 2: PLT5 510 E9600-XX
PLT5 520EA_P
- Group 3: PL 520
PL 520 E9622
PLT5 520

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and beam divergence for Green Laser Diodes3. Change A:

Status	Change A (typical operating voltage specifications)			
Current	Operating voltage	V_{op}	typ. max.	5.4 V 7 V
New	Operating voltage	V_{op}	typ. max.	5.0 V 7 V

NEW

- Affected Devices: as per Group 1 (PLT3 510, PLT5 510)

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and beam divergence for Green Laser Diodes3. Change A:

Status	Change A (typical operating voltage specifications)			
Current	Operating voltage	V_F	typ.	5.8 V
			max.	7 V
New	Operating voltage	V_F	typ.	5.2 V
			max.	7 V

NEW

- Affected Devices: as per Group 2 (PLT5 510_E9600-XX, PLT5 520EA_P)

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3. Change A:

Status	Change A (typical operating voltage specifications)			
Current	<u>for Peak output power of typ. 30 mW</u>			
	Operating voltage	V_F	typ. max.	6.5 V 8.0 V
	<u>for Peak output power of typ. 50 mW</u>			
	Operating voltage	V_F	typ. max.	6.9 V 8.0 V
New	<u>for Peak output power of typ. 30 mW</u>			
	Operating voltage	V_F	typ. max.	5.4 V 8.0 V
	<u>for Peak output power of typ. 50 mW</u>			
	Operating voltage	V_F	typ. max.	5.9 V 8.0 V

- Affected Devices: as per Group 3 (PL 520, PL 520 E9622, PLT5 520)

NEW

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3. Change B:

Status	Change B (typical beam divergence angle for parallel (slow axis) and perpendicular (fast axis) to pn-junction)			
Current	Beam divergence (FWHM) parallel to pn-junction	Θ_{\parallel}	min.	5 °
			typ.	6.6 °
			max.	9 °
	Beam divergence (FWHM) perpendicular to pn-junction	Θ_{\perp}	min.	19 °
		typ.	21.4 °	
		max.	25 °	
New	Beam divergence (FWHM) parallel to pn-junction	Θ_{\parallel}	min.	5 °
			typ.	7.0 °
			max.	9 °
	Beam divergence (FWHM) perpendicular to pn-junction	Θ_{\perp}	min.	19 °
		typ.	22.0 °	
		max.	25 °	

Affected Devices: as per Group 1 (PLT3 510, PLT5 510)

NEW

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3. Change B:

Status	Change B (typical beam divergence angle for parallel (slow axis) and perpendicular (fast axis) to pn-junction)			
Current	Beam divergence (FWHM) parallel to pn-junction	Θ_{\parallel}	min.	5 °
			typ.	6.6 °
			max.	10 °
	Beam divergence (FWHM) perpendicular to pn-junction	Θ_{\perp}	min.	19 °
typ.			21.4 °	
max.			25 °	
New	Beam divergence (FWHM) parallel to pn-junction	Θ_{\parallel}	min.	5 °
			typ.	7.0 °
			max.	10 °
	Beam divergence (FWHM) perpendicular to pn-junction	Θ_{\perp}	min.	19 °
typ.			22.0 °	
max.			25 °	

Affected Devices: as per Group 2 (PLT5 510_E9600-XX, PLT5 520EA_P)

NEW

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3. Change B:

Status	Change B (typical beam divergence angle for parallel (slow axis) and perpendicular (fast axis) to pn-junction)			
Current	Beam divergence (FWHM) parallel to pn-junction	Θ_{\parallel}	min.	5 °
			typ.	7 °
			max.	9 °
	Beam divergence (FWHM) perpendicular to pn-junction	Θ_{\perp}	min.	19 °
		typ.	22 °	
		max.	25 °	
New	Beam divergence (FWHM) parallel to pn-junction	Θ_{\parallel}	min.	5 °
			typ.	7 °
			max.	9 °
	Beam divergence (FWHM) perpendicular to pn-junction	Θ_{\perp}	min.	19 °
		typ.	22 °	
		max.	25 °	

NO CHANGE

Affected Devices: as per Group 3 (PL 520, PL 520 E9622, PLT5 520)

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4. Time Schedule

There will be a phase over period where the current and improved laser version will be delivered. During phase over period the datasheet limits remain unchanged. The datasheet (incl. updated maximum forward voltage specification) will be updated after the complete switch-over. Estimated time to complete the switch-over: 6 months.

- Start of Delivery: for Group 1 and 2: mid of November 2019
for Group 3: in Q1/2020

Group 1: PLT3 510, PLT5 510

Group 2: PLT5 510_E9600-XX, PLT5 520EA_P

Group 3: PL 520, PL 520 E9622, PLT5 520

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Thank you.

Products Affected by Information Notification

Number: OS-IN-2019-028

Name: Implementation of improved operating voltage and beam divergence for Green Laser Diodes

Release Date: 9/1/2019

Implementation Date: 11/30/2019

<i>Product</i>	<i>QNumber</i>	<i>QNumber Description</i>	<i>Part Number</i>
PLT5 510	Q65111A6310	PLT5 510	PLT5 510

Q-Number	Q-Description
Q65111A2445	PL 520_B1
Q65111A2445	PL 520_B1
Q65111A3559	PL 520_B1_2
Q65111A3559	PL 520_B1_2
Q65111A4705	PL 520_B3
Q65111A4705	PL 520_B3
Q65112A3397	PL 520_B1_2 C1009
Q65112A3397	PL 520_B1_2 C1009
Q65112A3401	PL 520_B1 C1009
Q65112A3401	PL 520_B1 C1009
Q65112A8162	PL 520 E9622
Q65112A2626	PLT3 510_E9608
Q65112A2626	PLT3 510_E9608
Q65112A4439	PLT3 510
Q65112A4439	PLT3 510
Q65111A6310	PLT5 510
Q65111A6310	PLT5 510
Q65112A1081	PLT5 510_E9600
Q65112A1081	PLT5 510_E9600
Q65112A3399	PLT5 510 C1009
Q65112A3399	PLT5 510 C1009
Q65112A5472	PLT5 510_E9600-XX
Q65112A5472	PLT5 510_E9600-XX
Q65112A5472	PLT5 510_E9600-XX
Q65112A6804	PLT5 510-B2B3 C1020
Q65112A6804	PLT5 510-B2B3 C1020
Q65111A5771	PLT5 520_B1-3
Q65111A5771	PLT5 520_B1-3
Q65111A6145	PLT5 520_B1-6
Q65111A6145	PLT5 520_B1-6
Q65112A3398	PLT5 520_B1_B6 C1009
Q65112A3398	PLT5 520_B1_B6 C1009
Q65112A3398	PLT5 520_B1_B6 C1009
Q65112A3398	PLT5 520_B1_B6 C1009
Q65112A3400	PLT5 520_B1_2_3 C1009
Q65112A3400	PLT5 520_B1_2_3 C1009
Q65112A3400	PLT5 520_B1_2_3 C1009
Q65112A3400	PLT5 520_B1_2_3 C1009
Q65112A4560	PLT5 520_B5
Q65112A4560	PLT5 520_B5
Q65112A7482	PLT5 520-B2B3
Q65112A7482	PLT5 520-B2B3
Q65112A7750	PLT5 520EA_P