

am^U OSRAM Preliminary PCN

AO-PCN-2022-017-N

Introduction of 2nd source for classic InGaAlP chip for Micro
SIDELED

Customer information package

OS Q CQM AM ITR
15.04.2022

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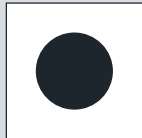
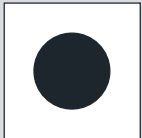
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Reason for change

Item	Description
1.	Secure continuous supply
2.	Introduction of additional supplier chips

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Description of change for standard chips

Item	Current status	2 nd source chip A	2 nd source chip B	2 nd source chip C
Wafer size [mm]	100	100	100	100
Wafer substrate	GaAs	GaAs	GaAs	GaAs
Height [μm]	220	175	180	180
Chip dicing process	Sawing	Sawing	Sawing	Sawing
Picture (schematic)				
Chip size [μm]	200 x 200	200 x 200	180 x 180	180 x 180
Front metal type	Al	Au	Au	Au
Front metal thickness [μm]	1.50	2.50	2.90	2.25
Back metal type	Au	Au	Au	Au
Back metal thickness [μm]	0.25	0.05	0.50	0.35
Bond pad size [μm]	100	100	100	100
Wafer Fab location	Regensburg/Germany	Supplier	Supplier	Supplier

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List of affected products

Standard				
Brand	Device	Chip A	Chip B	Chip C
Micro SIDELED	LS Y876		X	X
	LO Y876		X	X
	LY Y876	X	X	
	LG Y876	X		X

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PCN Samples (planned availability at Final PCN publication)

Standard
LS Y876
LO Y876
LY Y876
LG Y876

Color code:  available  on request

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Qualification Plan

Test item	Test condition	Test duration
Wet High Temperature Operating Life WHTOL1	$T_A = 85^\circ\text{C}$; r.H. = 85%; $I_F = \text{max. acc. to datasheet}$; $T_{\text{on/off}} = 30 \text{ min}$	1000 h
Wet High Temperature Operating Life WHTOL2	$T_A = 85^\circ\text{C}$; r.H. = 85%; $I_F = \text{min. acc. to datasheet}$	1000 h
Powered Temperature Cycle PTC	$T_A = -40/+85^\circ\text{C}$; $I_F = \text{max acc. to derating curve}$	1000 c
Temperature Cycling TC	$T_A = -40/+100^\circ\text{C}$; 15 min each extrem	1000 c
High Temperature Operating Life HTOL1	$T_s = \text{max acc. to datasheet}$; $I_F = \text{corresponding max. acc. to derating curve}$	1000 h
High Temperature Operating Life HTOL2	$I_F = \text{max acc. to datasheet}$; $T_s = \text{corresponding max. acc. to derating curve}$	1000 h
Pulsed Operating Life PLT	$T_A = 25^\circ\text{C}$; $I_F = \text{max acc. to datasheet}$; $t_p = 0,1 \text{ ms}$; $D = 3\%$	1000 h

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Qualification Plan

Test item	Test condition	Test duration
DEW	$T_{A,min} = 10^{\circ}\text{C}$; $T_{A,max} = 80^{\circ}\text{C}$; r.H. = 53-100%	10 c
H ₂ S	$T_A = 40^{\circ}\text{C}$; r.H. = 90%; 15 ppm H ₂ S	336 h
Flowing Mixed Gas FMG	$T_A = 25^{\circ}\text{C}$, r.H. = 75%; Test method 4	500 h
Board Flex BF	2 mm	1 x
Electrostatic Discharge HBM	Human Body Model	2000 V
Electrostatic Discharge CDM	Charged Device Model	750 V

Note:

- Planned devices for qualification tests: LS Y876, LO Y876, LY Y876, LG Y876 (please refer to next slide)

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Test vehicle overview

Standard				
Brand	Device	Chip A	Chip B	Chip C
Micro SIDELED	LS Y876		1 lot	1 lot
	LO Y876		1 lot	1 lot
	LY Y876	2 lots	1 lot	
	LG Y876	1 lot		1 lot

Note:

- Qualification results expected for: 07/2022

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Time schedule

for publication final PCN:	01.07.2022	
for PCN material (<u>after</u> implementation of change):		
Final qualification report	01.07.2022	
Samples available	01.07.2022	
Intended Start of delivery	01.12.2022 *)	*) or earlier if released by customer and upon mutual agreement
Customer Review Finalization:	01.07.2023 **)	***) Expected final feedback of customer. Released order volume is related to deliveries of material from both previous and additional source(s).

Note:
Pre-PCN material: Products of current status, means before implementation of the changes as described in the PCN.
PCN material: Products with implementation of the changes as described in the PCN.

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