Infonote AO-IN-2022-015-I

Update of datasheet for TO39 Ambient Light Sensor BPW 21

Customer information package

D.Czyborra, OS Q CQM ICI
2022-06-15

Agenda

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Update of datasheet for BPW 21

Reason for change

Item	Description
Datasheet	With OS-PCN-2020-015-A a new chip was introduced and characterization showed that datasheet modification is needed. Based on this, the datasheets is corrected accordingly.

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Description of change

Item	Current status	New status
Datasheet	Datasheet version 1.3	Datasheet version 1.4

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Changes in the datasheets

Item	Current status	New status
Photocurrent (Ordering Information)	10 µA	18 µA
V_{ESD}	n/a	max. 2 kV
Spectral sensitivity S	typ. 10 nA/lx	typ. 18 nA/lx
Dark current I_R at V_R = 5 V	typ. 2 nA	typ. 0.17 nA
Dark current I_R at V_R = 10 V	typ. 8 pA	typ. 40 pA
Spectral sensitivity of the chip λ = 550 nm S_λ	typ. 0.34 A/ W	n/a
Quantum yield of the chip λ = 550 nm η	typ. 0.77 Electrons/ Photon	n/a
Open-circuit voltage Ev = 1000 lx; Std. Light A V_0	min. 320 mV typ. 400 mV	typ. 340 mV at V_R = 0V
Short-circuit current Ev = 1000 lx; Std. Light A I_{SC}	typ. 10 µA	typ. 17.5 µA

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Changes in the datasheets

Item	Current status	New status
ESD withstand voltage V_{ESD}	n/a	2 kV
Capacitance C_0	typ. 580 pF	typ. 48 pF

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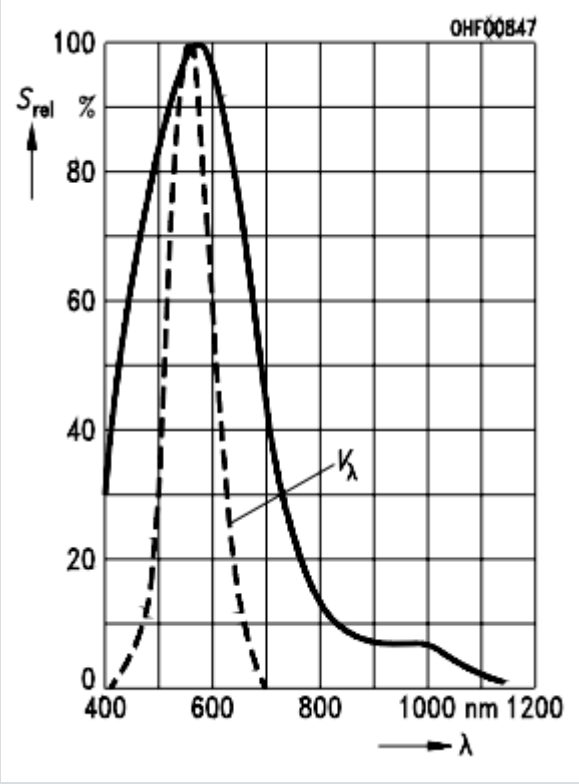
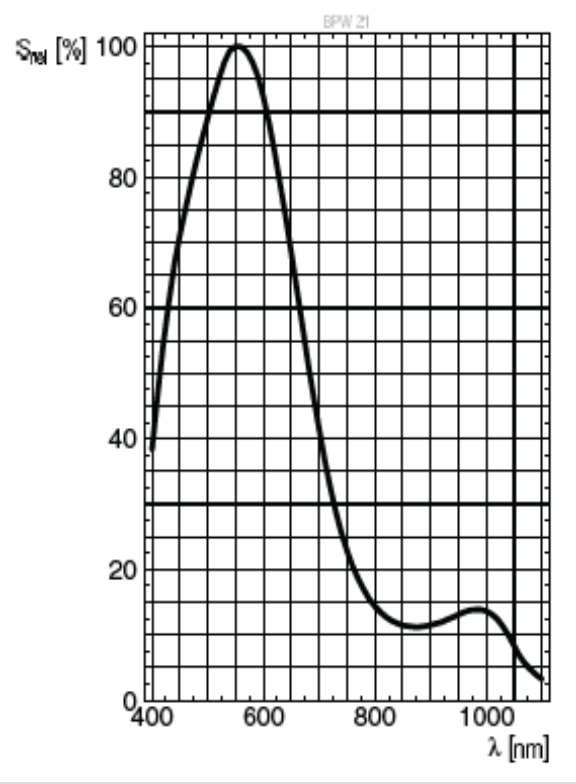
Changes in the datasheets

Item	Current status	New status
Relative Spectral Sensitivity $S_{rel} = f(\lambda)$; Changes in the specifications and the layout		

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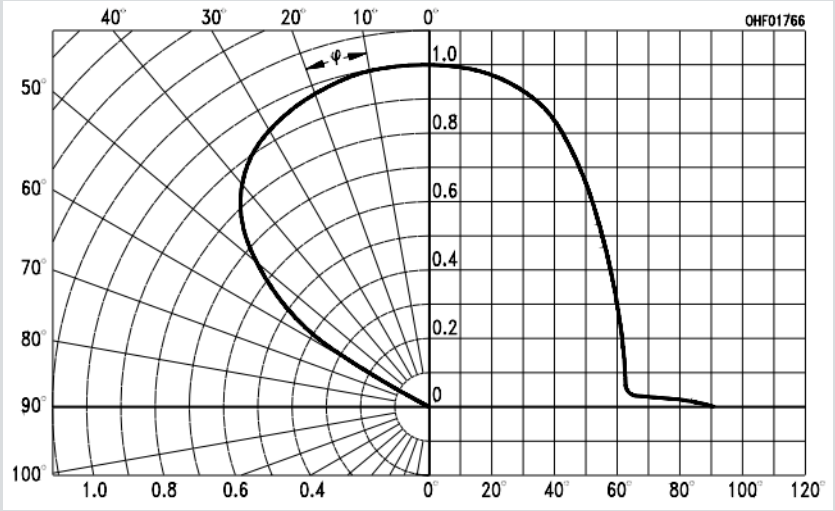
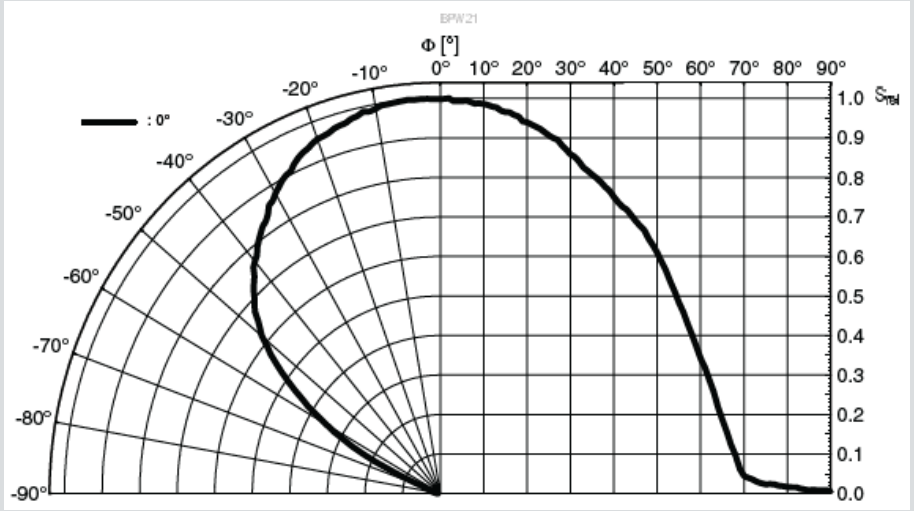
Item	Current status	New status
Directional Characteristics $S_{rel} = f(\varphi)$; Changes in the specifications and the layout		

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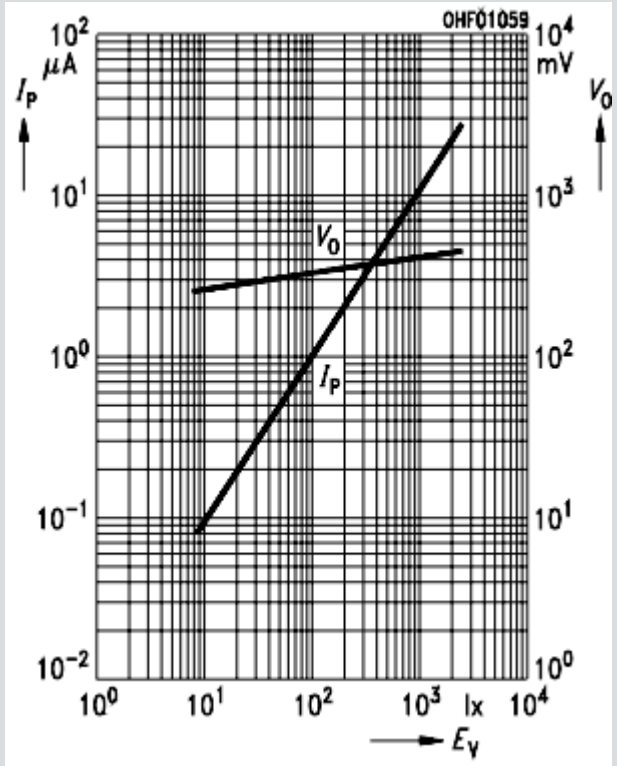
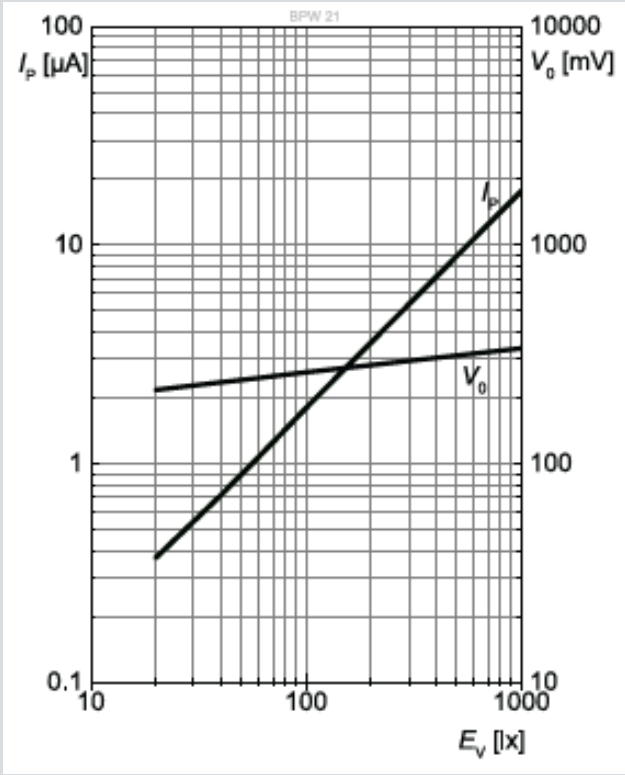
Item	Current status	New status
Photocurrent/Open-Circuit Voltage I_P (V_R = 5 V) / V_O = f (Ev); Changes in the specifications and the layout		

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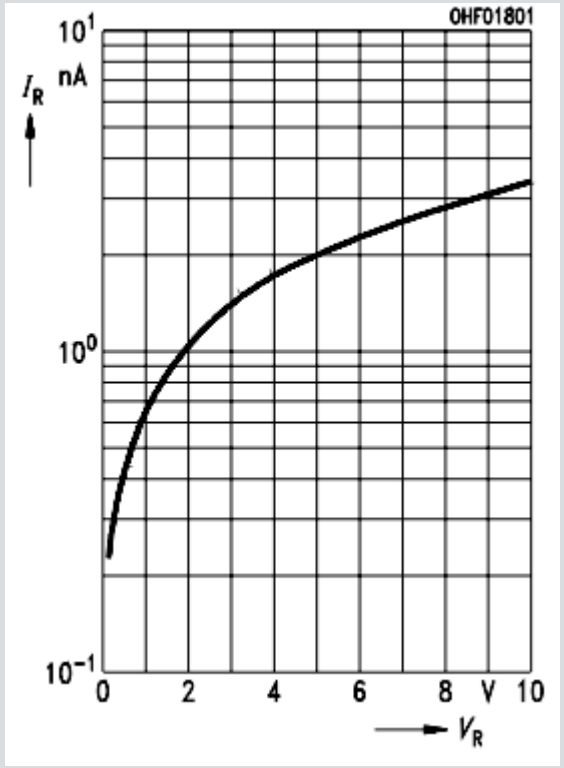
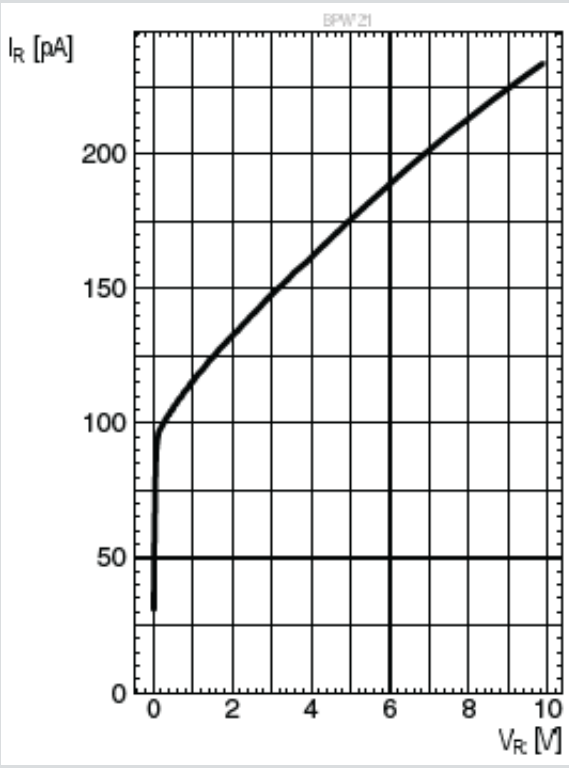
Item	Current status	New status
Dark Current $I_R = f(V_R)$; E = 0; Changes in the specifications and the layout		

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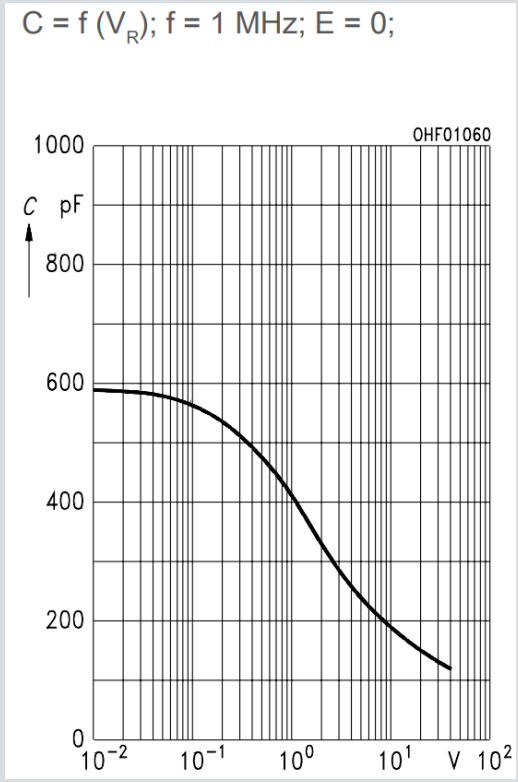
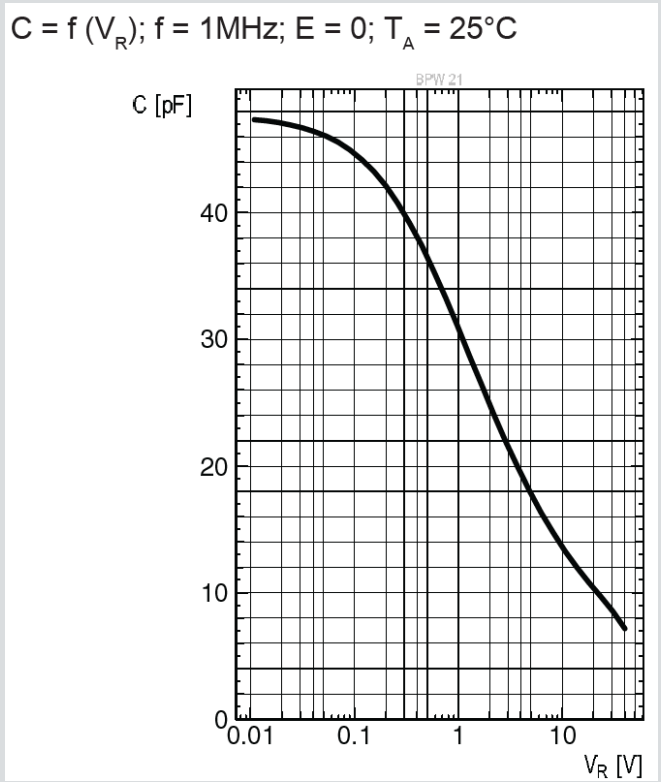
Changes in the datasheets

Item	Current status	New status
Capacitance; Changes in the specifications and the layout		

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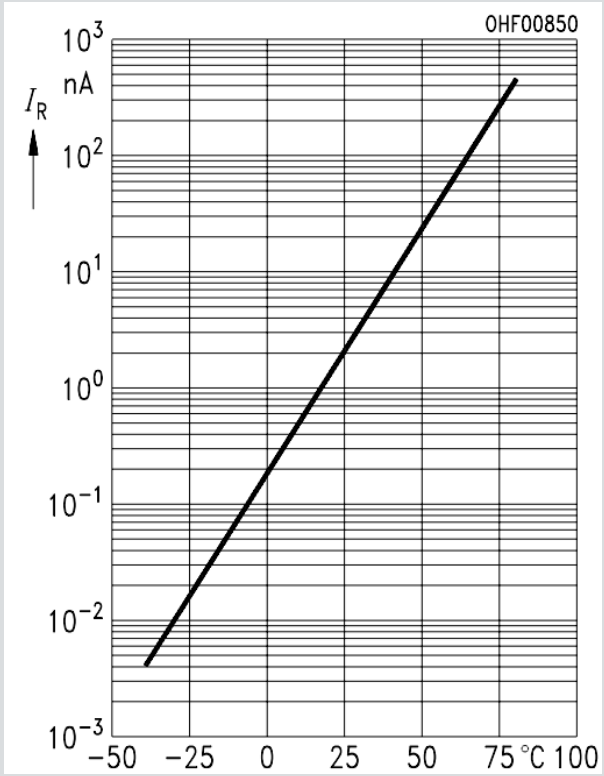
Item	Current status	New status
Dark Current $R = f(T_A)$; $E = 0$; $V_R = 5$ V		Graph will be removed

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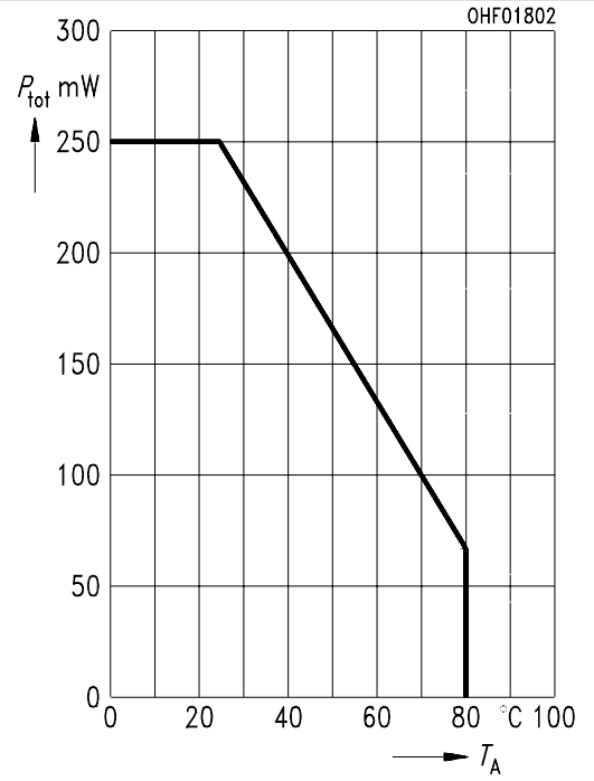
Item	Current status	New status
Power Consumption $P_{tot} = f(T_A)$;		Graph will be removed

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15.06.2022

Dear Customer,

please take note of this **Infonote**.
This customer notification is for information only and does not require customer approval.

Objective:	Update of Datasheet for BPW 21	
Affected products:	BPW 21	
Reason for change:	With OS-PCN-2020-015-A a new chip was introduced and characterization showed that datasheet modification is needed. Based on this, the datasheets is corrected accordingly.	
Description of change:	Current status Datasheet Version 1.3 For details refer to 2_cip_AO-IN-2022-015-I	New status Datasheet Version 1.4
Time schedule:	Updated datasheets are available	
Assessment:	No changes in fit, form and reliability	
Documentation:	Customer information package 2_cip_AO-IN-2022-015-I	

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