

Infonote

AO-IN-2025-058-I

Update of Datasheet for OSLON™ Square and Optimal Far Red

Customer Information package

OS MIL GROW
2025-06-16

AO-IN-2025-058-I

Update of Datasheet for OSLON™ Square and Optimal Far Red

1. Reason for change

- Performance upgrade and characterization update

AO-IN-2025-058-I

Update of Datasheet for OSLON™ Square and Optimal Far Red

OSLON™ Optimal
GF CSSRML.24

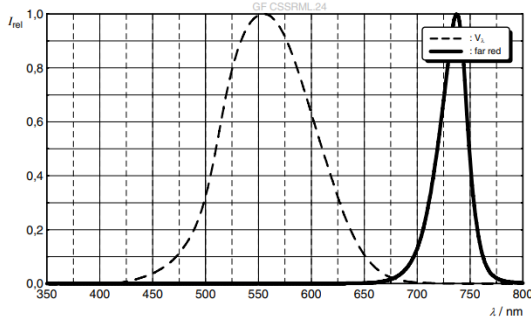
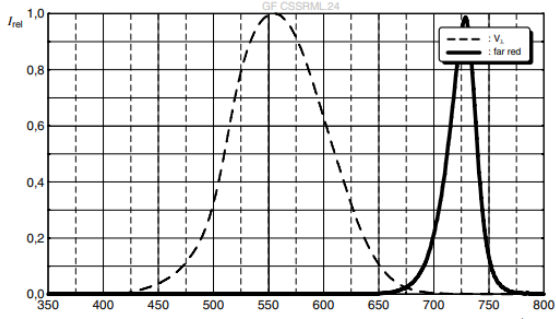
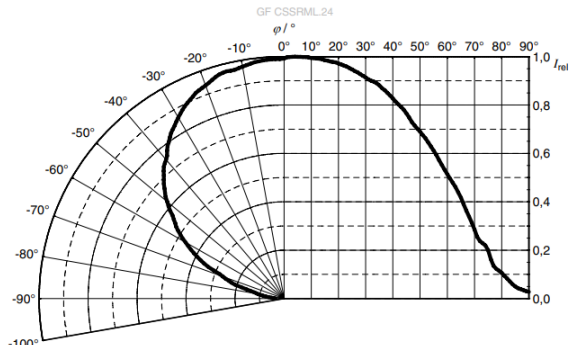
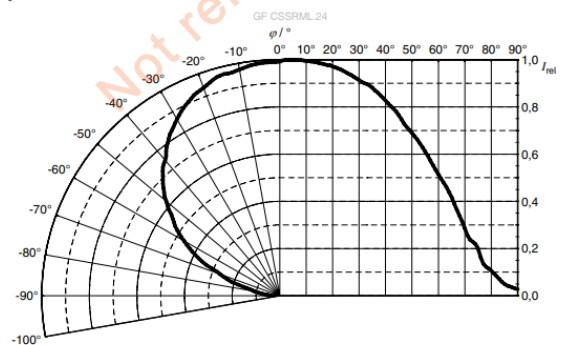
2. Description of change

	Current status	New Status
Typical Phie	446 mW	465 mW
Typical Vf	1.95 V	1.84V
Typical Lcentroid	727 nm	721nm
Typical Lpeak	730 nm	727nm
Typical Radiant Efficiency	65.3%	72.2%
Photon Flux	2.73 umol/s	2.80 umol/s
Photon Flux Efficacy	4.00 umol/J	4.35 umol/J
Electrical Thermal Resistance, RthJS elec.	2.0 K/W	1.50 K/W

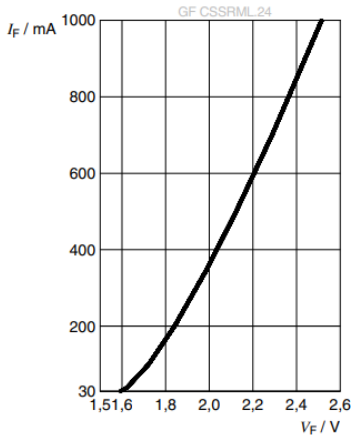
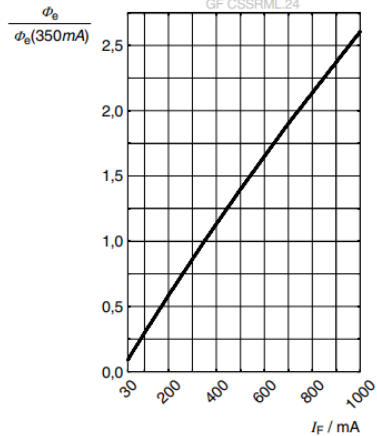
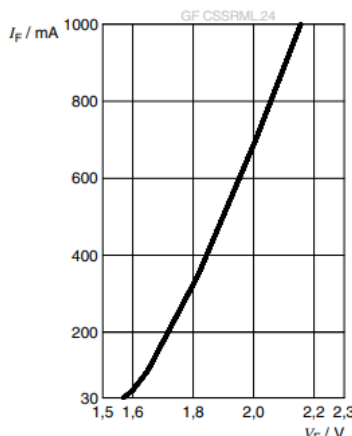
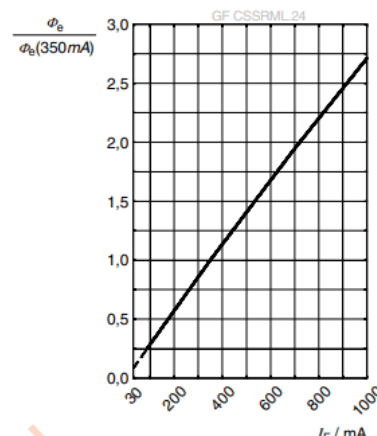
2. Description of change

	Current status								New Status																																																																																																
Brightness Groups	Brightness Groups <table><tr><th>Group</th><th>Total radiant flux ¹⁾ I_F = 350 mA min. Φ_E</th><th>Total radiant flux ¹⁾ I_F = 350 mA max. Φ_E</th><th>PPF * min. Φ_p</th><th>PPF * max. Φ_p</th><th>PPF/W * typ.</th><th>PF ** min. Φ_{p,b}</th><th>PF ** max. Φ_{p,b}</th><th>PF/W ** typ.</th></tr><tr><td>TN</td><td>380 mW</td><td>415 mW</td><td>0.098 μmol/s</td><td>0.107 μmol/s</td><td>0.15 μmol/J</td><td>2.32 μmol/s</td><td>2.54 μmol/s</td><td>3.56 μmol/J</td></tr><tr><td>TO</td><td>415 mW</td><td>450 mW</td><td>0.107 μmol/s</td><td>0.116 μmol/s</td><td>0.16 μmol/J</td><td>2.54 μmol/s</td><td>2.75 μmol/s</td><td>3.88 μmol/J</td></tr><tr><td>UJ</td><td>450 mW</td><td>485 mW</td><td>0.116 μmol/s</td><td>0.125 μmol/s</td><td>0.18 μmol/J</td><td>2.75 μmol/s</td><td>2.97 μmol/s</td><td>4.19 μmol/J</td></tr><tr><td>UK</td><td>485 mW</td><td>525 mW</td><td>0.125 μmol/s</td><td>0.135 μmol/s</td><td>0.19 μmol/J</td><td>2.97 μmol/s</td><td>3.21 μmol/s</td><td>4.53 μmol/J</td></tr><tr><td>UL</td><td>525 mW</td><td>565 mW</td><td>0.135 μmol/s</td><td>0.145 μmol/s</td><td>0.21 μmol/J</td><td>3.21 μmol/s</td><td>3.46 μmol/s</td><td>4.89 μmol/J</td></tr></table> Note: [*] Photosynthetic Photon Flux includes wavelengths between 400 and 700 nm Note: [**] Photon Flux includes wavelengths between 280 and 800 nm Note: PPF and PF values are for reference only									Group	Total radiant flux ¹⁾ I _F = 350 mA min. Φ _E	Total radiant flux ¹⁾ I _F = 350 mA max. Φ _E	PPF * min. Φ _p	PPF * max. Φ _p	PPF/W * typ.	PF ** min. Φ _{p,b}	PF ** max. Φ _{p,b}	PF/W ** typ.	TN	380 mW	415 mW	0.098 μmol/s	0.107 μmol/s	0.15 μmol/J	2.32 μmol/s	2.54 μmol/s	3.56 μmol/J	TO	415 mW	450 mW	0.107 μmol/s	0.116 μmol/s	0.16 μmol/J	2.54 μmol/s	2.75 μmol/s	3.88 μmol/J	UJ	450 mW	485 mW	0.116 μmol/s	0.125 μmol/s	0.18 μmol/J	2.75 μmol/s	2.97 μmol/s	4.19 μmol/J	UK	485 mW	525 mW	0.125 μmol/s	0.135 μmol/s	0.19 μmol/J	2.97 μmol/s	3.21 μmol/s	4.53 μmol/J	UL	525 mW	565 mW	0.135 μmol/s	0.145 μmol/s	0.21 μmol/J	3.21 μmol/s	3.46 μmol/s	4.89 μmol/J	Brightness Groups <table><tr><th>Group</th><th>Total radiant flux ¹⁾ I_F = 350 mA min. Φ_E</th><th>Total radiant flux ¹⁾ I_F = 350 mA max. Φ_E</th><th>PF ** min. Φ_{p,b}</th><th>PF ** max. Φ_{p,b}</th><th>PF/W ** typ.</th></tr><tr><td>TN</td><td>380 mW</td><td>415 mW</td><td>2.290 μmol/s</td><td>2.501 μmol/s</td><td>3.72 μmol/J</td></tr><tr><td>TO</td><td>415 mW</td><td>450 mW</td><td>2.501 μmol/s</td><td>2.712 μmol/s</td><td>4.05 μmol/J</td></tr><tr><td>UJ</td><td>450 mW</td><td>485 mW</td><td>2.712 μmol/s</td><td>2.923 μmol/s</td><td>4.38 μmol/J</td></tr><tr><td>UK</td><td>485 mW</td><td>525 mW</td><td>2.923 μmol/s</td><td>3.164 μmol/s</td><td>4.73 μmol/J</td></tr><tr><td>UL</td><td>525 mW</td><td>565 mW</td><td>3.164 μmol/s</td><td>3.405 μmol/s</td><td>5.10 μmol/J</td></tr></table> Note: [*] Photon Flux includes wavelengths between 280 and 800 nm Note: [**] PF values are for reference only						Group	Total radiant flux ¹⁾ I _F = 350 mA min. Φ _E	Total radiant flux ¹⁾ I _F = 350 mA max. Φ _E	PF ** min. Φ _{p,b}	PF ** max. Φ _{p,b}	PF/W ** typ.	TN	380 mW	415 mW	2.290 μmol/s	2.501 μmol/s	3.72 μmol/J	TO	415 mW	450 mW	2.501 μmol/s	2.712 μmol/s	4.05 μmol/J	UJ	450 mW	485 mW	2.712 μmol/s	2.923 μmol/s	4.38 μmol/J	UK	485 mW	525 mW	2.923 μmol/s	3.164 μmol/s	4.73 μmol/J	UL	525 mW	565 mW	3.164 μmol/s	3.405 μmol/s	5.10 μmol/J
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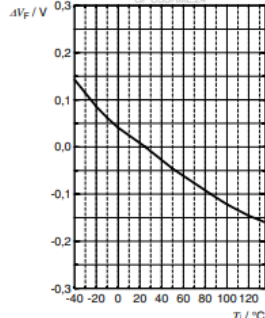
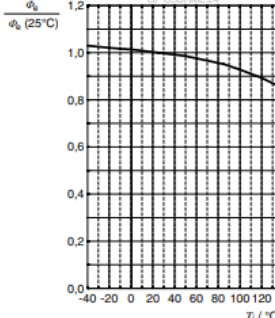
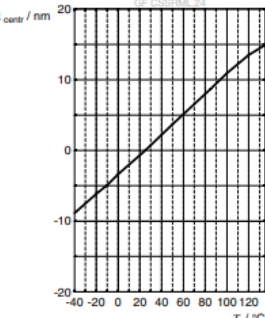
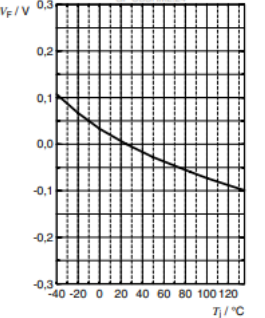
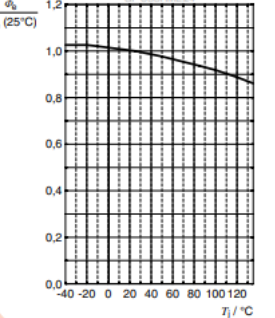
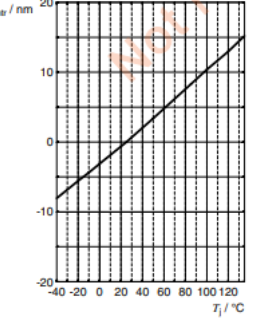
2. Description of change

	Current status	New Status
Relative Spectral Emission	Relative Spectral Emission ⁵⁾ $I_{rel} = f(\lambda); I_F = 350 \text{ mA}; T_J = 25 \text{ °C}$ 	Relative Spectral Emission ⁵⁾ $I_{rel} = f(\lambda); I_F = 350 \text{ mA}; T_J = 25 \text{ °C}$ 
Radiation Characteristics	Radiation Characteristics ⁵⁾ $I_{rel} = f(\varphi); T_J = 25 \text{ °C}$ 	Radiation Characteristics ⁵⁾ $I_{rel} = f(\varphi); T_J = 25 \text{ °C}$ 

2. Description of change

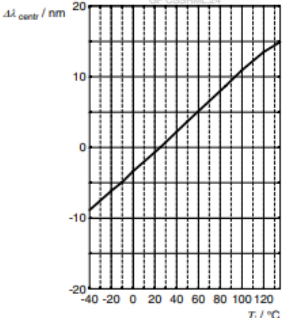
	Current status	New Status
Current-dependent characteristics	Forward current ⁵⁾ $I_F = f(V_F); T_J = 25\text{ °C}$  Relative Radiant Power ^{5), 6)} $\Phi_E / \Phi_E(350\text{ mA}) = f(I_F); T_J = 25\text{ °C}$ 	Forward current ⁵⁾ $I_F = f(V_F); T_J = 25\text{ °C}$  Relative Radiant Power ^{5), 6)} $\Phi_E / \Phi_E(350\text{ mA}) = f(I_F); T_J = 25\text{ °C}$ 

2. Description of change

	Current status	New Status
Temperature-dependent characteristics	Forward Voltage ⁵⁾ $\Delta V_F = V_F - V_F(25\text{ }^{\circ}\text{C}) = f(T_j); I_F = 350\text{ mA}$  Relative Radiant Power ⁵⁾ $\Phi_E / \Phi_E(25\text{ }^{\circ}\text{C}) = f(T_j); I_F = 350\text{ mA}$  Centroid Wavelength ⁵⁾ $\Delta \lambda_{\text{cent}} = \lambda_{\text{cent}} - \lambda_{\text{cent}}(25\text{ }^{\circ}\text{C}) = f(T_j); I_F = 350\text{ mA}$ 	Forward Voltage ⁵⁾ $\Delta V_F = V_F - V_F(25\text{ }^{\circ}\text{C}) = f(T_j); I_F = 350\text{ mA}$  Relative Radiant Power ⁵⁾ $\Phi_E / \Phi_E(25\text{ }^{\circ}\text{C}) = f(T_j); I_F = 350\text{ mA}$  Centroid Wavelength ⁵⁾ $\Delta \lambda_{\text{cent}} = \lambda_{\text{cent}} - \lambda_{\text{cent}}(25\text{ }^{\circ}\text{C}) = f(T_j); I_F = 350\text{ mA}$ 

Centroid Wavelength ⁵⁾

$\Delta \lambda_{\text{centr}} = \lambda_{\text{centr}} - \lambda_{\text{centr}}(25\text{ }^{\circ}\text{C}) = f(T_j); I_F = 350\text{ mA}$



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Update of Datasheet for OSLON™ Square and Optimal Far Red

OSLON™ Square
GF CSBPM2.24

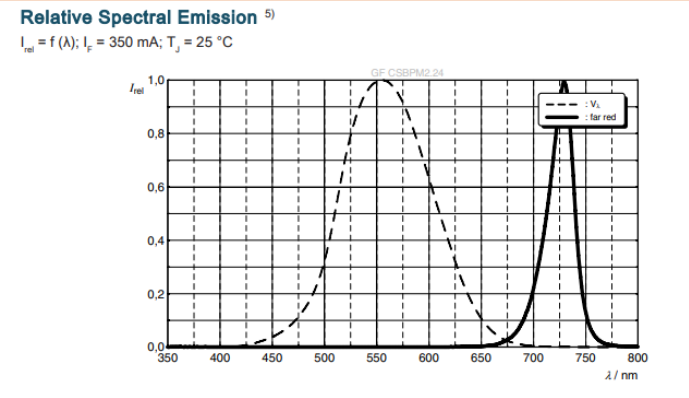
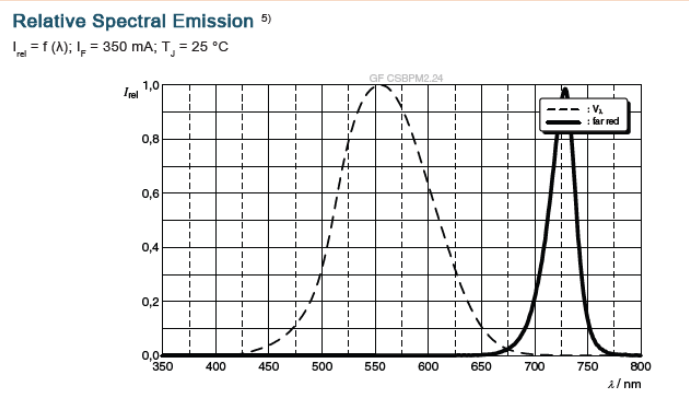
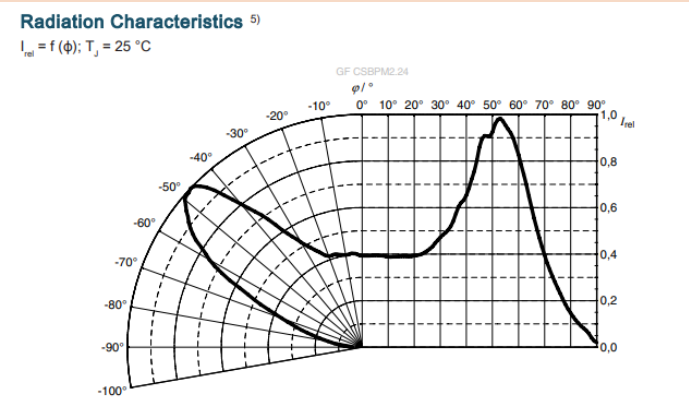
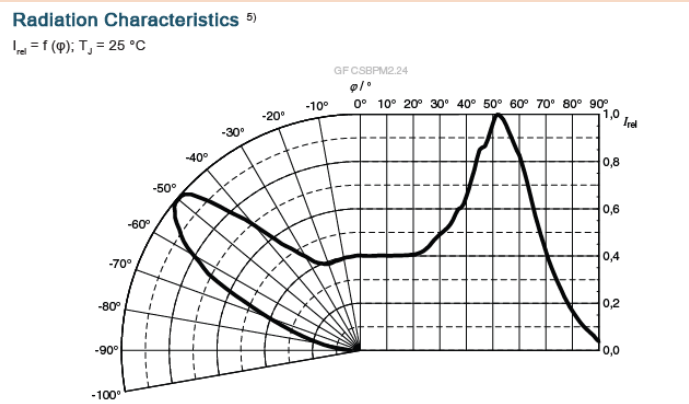
2. Description of change

	Current status	New Status
Typical Phie	440mW	460mW
Typical Vf	1.95V	1.84V
Typical Lcentroid	727nm	721nm
Typical Lpeak	730nm	727nm
Typical Radiant Efficiency	65%	71.4%
Photon Flux	2.66umol/s	2.77umol/s
Photon Flux Efficacy	3.90umol/J	4.31umol/J
Electrical Thermal Resistance, RthJS elec.	2.7 K/W	2.09 K/W

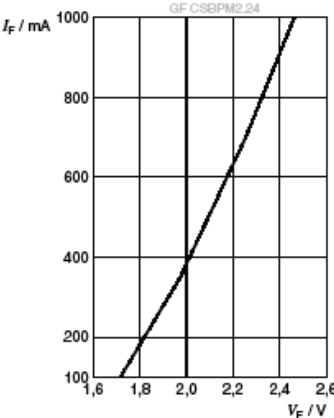
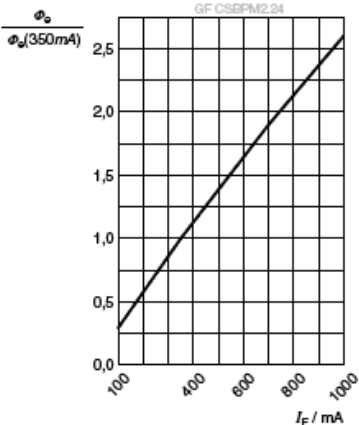
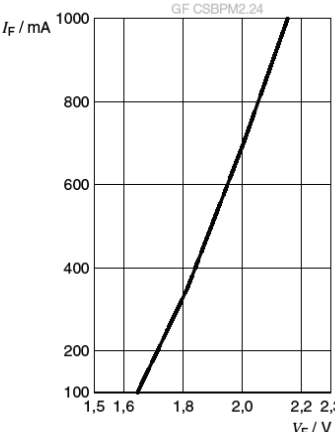
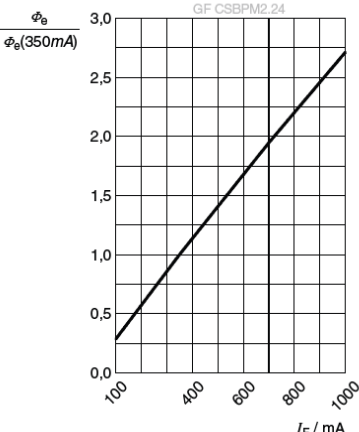
2. Description of change

	Current status								New Status						
Brightness Groups															
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	Group	Total radiant flux ¹⁾ I _F = 350 mA min. Φ _E	Total radiant flux ¹⁾ I _F = 350 mA max. Φ _E	PPF *	PPF *	PPF/W *	PF **	PF **	PPF/W **	Group	Total radiant flux ¹⁾ I _F = 350 mA min. Φ _E	Total radiant flux ¹⁾ I _F = 350 mA max. Φ _E	PF **	PF **	PPF/W **
				min.	max.	typ.	min.	max.	typ.				min.	max.	typ.
				Φ _p	Φ _p		Φ _{p,b}	Φ _{p,b}					Φ _{p,b}	Φ _{p,b}	
	TN	380 mW	415 mW	0.180 μmol/s	0.196 μmol/s	0.28 μmol/J	2.30 μmol/s	2.51 μmol/s	3.52 μmol/J	TN	380 mW	415 mW	2.290 μmol/s	2.501 μmol/s	3.72 μmol/J
	TO	415 mW	450 mW	0.196 μmol/s	0.213 μmol/s	0.30 μmol/J	2.51 μmol/s	2.72 μmol/s	3.83 μmol/J	TO	415 mW	450 mW	2.501 μmol/s	2.712 μmol/s	4.05 μmol/J
	UJ	450 mW	485 mW	0.213 μmol/s	0.229 μmol/s	0.32 μmol/J	2.72 μmol/s	2.93 μmol/s	4.14 μmol/J	UJ	450 mW	485 mW	2.712 μmol/s	2.923 μmol/s	4.38 μmol/J
	Note: [*] Photosynthetic Photon Flux includes wavelengths between 400 and 700 nm Note: [**] Photon Flux includes wavelengths between 280 and 800 nm Note: PPF and PF values are for reference only									Note: [**] Photon Flux includes wavelengths between 280 and 800 nm Note: PF values are for reference only					

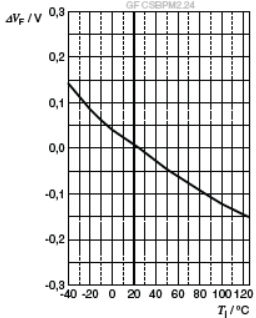
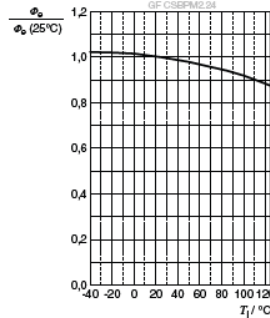
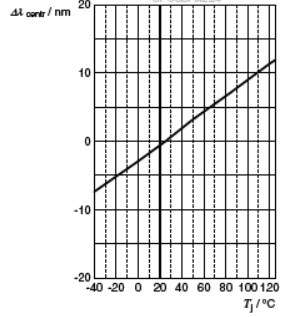
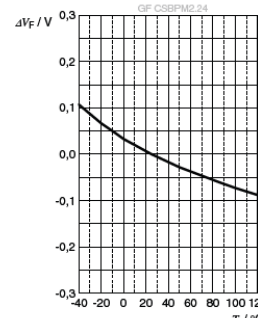
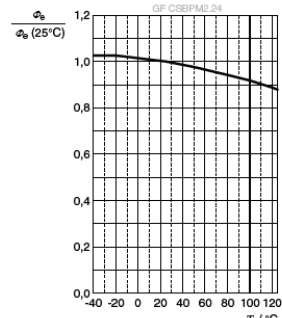
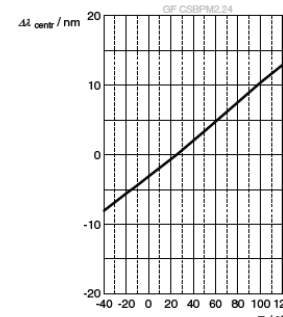
2. Description of change

	Current status	New Status
Relative Spectral Emission	Relative Spectral Emission ⁵⁾ $I_{rel} = f(\lambda); I_F = 350 \text{ mA}; T_J = 25 \text{ °C}$ 	Relative Spectral Emission ⁵⁾ $I_{rel} = f(\lambda); I_F = 350 \text{ mA}; T_J = 25 \text{ °C}$ 
Radiation Characteristics	Radiation Characteristics ⁵⁾ $I_{rel} = f(\phi); T_J = 25 \text{ °C}$ 	Radiation Characteristics ⁵⁾ $I_{rel} = f(\phi); T_J = 25 \text{ °C}$ 

2. Description of change

	Current status	New Status
Current-dependent characteristics	Forward current ⁵⁾ $I_F = f(V_F); T_J = 25\text{ °C}$  Relative Radiant Power ^{5), 6)} $\Phi_E / \Phi_E(350\text{ mA}) = f(I_F); T_J = 25\text{ °C}$ 	Forward current ⁵⁾ $I_F = f(V_F); T_J = 25\text{ °C}$  Relative Radiant Power ^{5), 6)} $\Phi_E / \Phi_E(350\text{ mA}) = f(I_F); T_J = 25\text{ °C}$ 

2. Description of change

	Current status	New Status
Temperature-dependent characteristics	Forward Voltage ⁵⁾ $\Delta V_F = V_F - V_F(25\text{ °C}) = f(T_J); I_F = 350\text{ mA}$  Relative Radiant Power ⁵⁾ $\Phi_E/\Phi_E(25\text{ °C}) = f(T_J); I_F = 350\text{ mA}$  Centroid Wavelength ⁵⁾ $\Delta\lambda_{\text{centr}} = \lambda_{\text{centr}} - \lambda_{\text{centr}}(25\text{ °C}) = f(T_J); I_F = 350\text{ mA}$ 	Forward Voltage ⁵⁾ $\Delta V_F = V_F - V_F(25\text{ °C}) = f(T_J); I_F = 350\text{ mA}$  Relative Radiant Power ⁵⁾ $\Phi_E/\Phi_E(25\text{ °C}) = f(T_J); I_F = 350\text{ mA}$  Centroid Wavelength ⁵⁾ $\Delta\lambda_{\text{centr}} = \lambda_{\text{centr}} - \lambda_{\text{centr}}(25\text{ °C}) = f(T_J); I_F = 350\text{ mA}$ 

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3. List of affected products

OSLON™ Optimal
GF CSSRML.24

OSLON™ Square
GF CSBPM2.24

No change to device name

AO-IN-2025-058-I

Update of Datasheet for OSLON™ Square and Optimal Far Red

4. Samples

OSLON™ Optimal	Sample availability
GF CSSRML.24	June 2025

OSLON™ Square	Sample availability
GF CSBPM2.24	June 2025

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Update of Datasheet for OSLON™ Square and Optimal Far Red

5. Time schedule

Time schedule	Sample availability	Available
	Intended start of delivery	01.07.2025