

GinoLED Flex Diffuse White Indoor Version (TOP & SIDE)

Technical Datasheet



*Above product picture not finalized yet, only for reference.

Product description

GinoLED Flex Diffuse White Indoor Version (TOP & White) is design for indoor outdoor applications. Focus on quality of light to support CRI90 performance, and selected suitable silicon material together with back up PE film solution, enhance robustness, reasonable price range fit linear type indoor application requirements.

Key Features & Benefits

- 10x10mm Super slim design, best fit for embedded applications.
- Diffuse version, Side emitting, High uniformity without hot spot and dark area
- Customization length to meet customer difference length requirements
- 3 SDCM, CRI90 (CRI80 only for SIDE version 800lm/meter)
- IP65 protection for indoor outdoor applications
- 110°viewing angle per module
- Dimmable
- Up to 50,000 hrs lifetime @ $t_c \text{ max}$

* IP65 endcap after cutting assembly available.

Applications

- Hospitality lighting
- Cabinet lighting
- Architecture lighting
- Wall integration

SPECIFICATION

Product	Color [K]	Voltage [V DC] *	Power/reel [W]*	Lumen/reel [lm]*	Power/m [W]	Lumen/m [lm]*	CRI	Operable length [mm]	Beam Angle [°]
GFDSID800-G1-830-05	3000	24	55	3500	12	700	80	5005	110
GFDSID800-G1-840-05	4000	24	55	3750	12	750	80	5005	110
GFDSID600-G1-927-01	2700	24	11	505	11	505	90	1005	110
GFDSID600-G1-930-01	3000	24	11	520	11	520	90	1005	110
GFDSID600-G1-940-01	4000	24	11	560	11	560	90	1005	110
GFDSID600-G1-957-01	5700	24	11	560	11	560	90	1005	110
GFDSID600-G1-927-05	2700	24	55	2525	11	505	90	5005	110
GFDSID600-G1-930-05	3000	24	55	2600	11	520	90	5005	110
GFDSID600-G1-940-05	4000	24	55	2800	11	560	90	5005	110
GFDSID600-G1-957-05	5700	24	55	2800	11	560	90	5005	110
GFDTID800-G1-927-01	2700	24	11	675	11	675	90	1005	110
GFDTID800-G1-930-01	3000	24	11	705	11	705	90	1005	110
GFDTID800-G1-940-01	4000	24	11	750	11	750	90	1005	110
GFDTID800-G1-957-01	5700	24	11	750	11	750	90	1005	110
GFDTID800-G1-927-05	2700	24	52	3375	11	675	90	5005	110
GFDTID800-G1-930-05	3000	24	52	3525	11	705	90	5005	110
GFDTID800-G1-940-05	4000	24	52	3750	11	750	90	5005	110
GFDTID800-G1-957-05	5700	24	52	3750	11	750	90	5005	110

Due to the special conditions of the manufacturing processes of LED the typical data of technical parameters can only reflect statistical figures and do not necessarily correspond to the actual parameters of each single product which could differ from the typical data.

*1. One-meter data, tolerance of lumen flux is $\pm 10\%$.

2. Tolerance of measurements for the color rendering Ra is ± 2 ;

3. Tolerance of measurements for the Chromaticity Coordinate is ± 0.005 ; the tolerance of CCT should be calculated accordingly.

Operating data for complete reel

Item	GFDSID800-G1-8XX-05	GFDSID600-G1-9XX-01	GFDSID600-G1-9XX-05	GFDTID800-G1-9XX-01	GFDTID800-G1-9XX-05
Driving modes	Constant voltage	Constant voltage	Constant voltage	Constant voltage	Constant voltage
Supply voltage range	24.0 $\pm$ 1.0VDC	24.0 $\pm$ 1.0VDC	24.0 $\pm$ 1.0VDC	24.0 $\pm$ 1.0VDC	24.0 $\pm$ 1.0VDC
Power Range, per reel @ ta=25°C	55W $\pm 10\%$	11W $\pm 10\%$	55W $\pm 10\%$	11W $\pm 10\%$	52W $\pm 10\%$
Reverse protect voltage range	<24VDC	<24VDC	<24VDC	<24VDC	<24VDC
Working voltage for insulation	25VDC	25VDC	25VDC	25VDC	25VDC
ESD protection	Contact 2KV, Air 4KV	Contact 2KV, Air 4KV	Contact 2KV, Air 4KV	Contact 2KV, Air 4KV	Contact 2KV, Air 4KV
Connection wire gauge	20AWG	20AWG	20AWG	20AWG	20AWG
Dimmable	DALI	DALI	DALI	DALI	DALI
Min Bending Radius	60 mm	60 mm	60 mm	60 mm	60 mm

Due to the special conditions of the manufacturing processes of LED the typical data of technical parameters can only reflect statistical figures and do not necessarily correspond to the actual parameters of each single product which could differ from the typical data.

Optical parameter

Color and Color rendering parameters

Product	Tpy. CCT(K)	Min. CCT (K)	Max. CCT (K)	SDCM	Ra
GFDSID800-G1-827	2700K	2650	2875	3	80
GFDSID800-G1-830	3000K	2875	3250	3	80
GFDSID800-G1-840	4000K	3700	4200	3	80
GFDSID800-G1-857	5700K	5400	5950	3	80
GFDSID600-G1-927	2700K	2650	2875	3	90
GFDSID600-G1-930	3000K	2875	3250	3	90
GFDSID600-G1-940	4000K	3700	4200	3	90
GFDSID600-G1-957	5700K	5400	5950	3	90
GFDTID800-G1-927	2700K	2700	2925	3	90
GFDTID800-G1-930	3000K	2875	3250	3	90
GFDTID800-G1-940	4000K	3700	4200	3	90
GFDTID800-G1-957	5700K	5400	5950	3	90

*1. Testing based on $t_c=40^{\circ}\text{C}$. One-meter data.

2. Tolerance of measurements for the color rendering Ra is ± 2 ;

3. Tolerance of measurements for the Chromaticity Coordinate is ± 0.005 ; the tolerance of CCT should be calculated accordingly.

Brightness parameter

Product	CCT	Current(mA)	lumen flux/lm	
			Min.	Max.
GFDSID800-G1-827-01	2700K	500	603	737
GFDSID800-G1-830-01	3000K	500	630	770
GFDSID800-G1-840-01	4000K	500	675	825
GFDSID800-G1-857-01	5700K	500	675	825
GFDSID800-G1-827-05	2700K	2150	3015	3685
GFDSID800-G1-830-05	3000K	2150	3150	3850
GFDSID800-G1-840-05	4000K	2150	3375	4125
GFDSID800-G1-857-05	5700K	2150	3375	4125
GFDSID600-G1-927-01	2700K	480	485	585
GFDSID600-G1-930-01	3000K	480	505	600
GFDSID600-G1-940-01	4000K	480	540	660
GFDSID600-G1-957-01	5700K	480	540	660
GFDSID600-G1-927-05	2700K	2166	2273	2778
GFDSID600-G1-930-05	3000K	2166	2340	2860
GFDSID600-G1-940-05	4000K	2166	2520	3080
GFDSID600-G1-957-05	5700K	2166	2520	3080
GFDTID800-G1-927-01	2700K	460	608	740
GFDTID800-G1-930-01	3000K	460	635	775
GFDTID800-G1-940-01	4000K	460	675	825
GFDTID800-G1-957-01	5700K	460	675	825
GFDTID800-G1-927-05	2700K	2150	3038	3713
GFDTID800-G1-930-05	3000K	2150	3173	3878
GFDTID800-G1-940-05	4000K	2150	3375	4125
GFDTID800-G1-957-05	5700K	2150	3375	4125

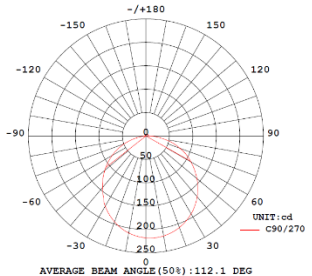
Remarks: Testing condition is DC 24V, $t_p=40^{\circ}\text{C}$.

- Exceeding maximum ratings for operating and storage temperature will reduce expected lifetime or destroy the LED Module.

- The temperature of the LED module must be measured at the t_c -point according to EN60598-1 in thermal stable status.

- Due to the special conditions of the manufacturing processes of LED, the typical data or calculated correlations of technical parameters can only reflect statistical figures. These do not necessarily correspond to the actual parameters of each single product, which could differ from the typical data and calculated correlations or the typical characteristic line. If requested, e.g. because of technical improvements, these typ. data will be changed without any further notice.

Light distribution

Product	Distribution Graph	Beam angle range (2X $\theta_{1/2}$)
GFDTSIDXXX-G1-9XX-XX GFDSIDXXX-G1-8XX-XX		110 ± 5°

Environmental and Application Conditions

Items	IP version
Ambient temperature range (ta on free air)	-25°C~55°C
Operating (case) temperature max (tc)*	65°C
Storage temperature range	-30°C~85°C
IP rating before cutting	IP65
IP rating after cut and assembly by accessory	IP65
Lifetime @ tc max (L70B50)	50,000 hrs.
Cuttable length (smallest unit)	50.0mm
Allowed max length of flex*	8.5m

The modules are designed for operation with OPTOTRONIC® / Element Driver.

*) Exceeding maximum ratings for operating and storage temperature will reduce expected lifetime or destroy the light engine. The temperature of the LED module must be measured at the tc-point according to EN60598-1 in thermally settled conditions with a temperature sensor.

*) Supporting IP20 connector and endcap accessories for indoor using only.

Standards / Normative Requirements

Eye security	EN62471/EN62778
CE	Applying
CB	Applying
ROHS&REACH	Applying
Application	Indoor and Semi-outdoor

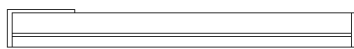
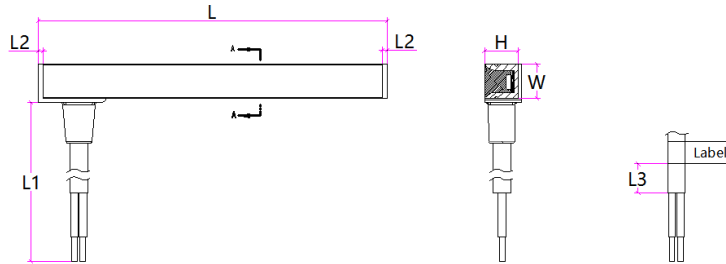
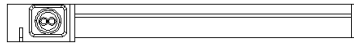
Max. Cable Length (From driver to module)

Max. Cable Length – from driver to module											
Input: DC24V											
Item Code	Light Length (m)	Max. Cable Length									
		0.32mm ²		0.52mm ²		0.81mm ²		1.32mm ²		2.07mm ²	
		22AWG		20AWG		18AWG		16AWG		14AWG	
		m	ft	m	ft	m	ft	m	ft	m	ft
GFDSID800-G1-8XX-0X	1	19	65	40	120	50	155	75	245	130	415
	2	15	40	20	70	25	85	45	150	75	240
	3	11	30	16	50	20	65	30	100	50	165
	4	6	20	10	30	12	40	20	65	30	100
	5	5	18	9	25	11	35	18	55	25	90
Standard: 1. Ta=25°C; 2. Basing on the light loss no more than 10% when input voltage 24VDC.											

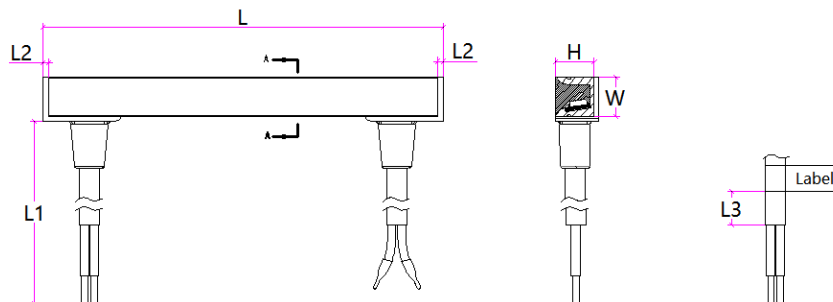
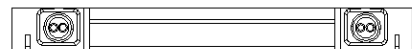
Max. Cable Length – from driver to module											
Input: DC24V											
Item Code	Light Length (m)	Max. Cable Length									
		0.32mm ²		0.52mm ²		0.81mm ²		1.32mm ²		2.07mm ²	
		22AWG		20AWG		18AWG		16AWG		14AWG	
		m	ft	m	ft	m	ft	m	ft	m	ft
GFDSID600-G1-9XX-0X	1	19	65	40	120	50	155	75	245	130	415
	2	15	40	20	70	25	85	45	150	75	240
	3	11	30	16	50	20	65	30	100	50	165
	4	6	20	10	30	12	40	20	65	30	100
	5	5	18	9	25	11	35	18	55	25	90
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Max. Cable Length – from driver to module											
Input: DC24V											
Item Code	Light Length (m)	Max. Cable Length									
		0.32mm ²		0.52mm ²		0.81mm ²		1.32mm ²		2.07mm ²	
		22AWG		20AWG		18AWG		16AWG		14AWG	
		m	ft	m	ft	m	ft	m	ft	m	ft
GFDTID800-G1-9XX-0X	1	19	65	40	120	50	155	75	245	130	415
	2	15	40	20	70	25	85	45	150	75	240
	3	11	30	16	50	20	65	30	100	50	165
	4	6	20	10	30	12	40	20	65	30	100
	5	5	18	9	25	11	35	18	55	25	90
Standard: 1. Ta=25°C; 2. Basing on the light loss no more than 10% when input voltage 24VDC.											

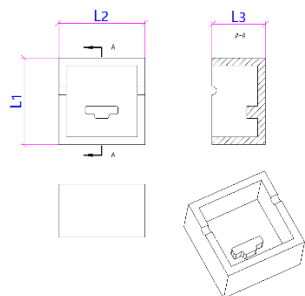
Product Drawing



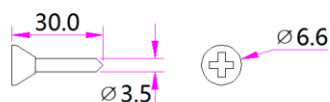
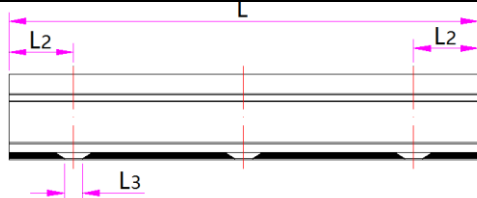
Dimension/mm	L1	L2	L3	W	H	GFD(S)IDXXX-G1-9XX-01 GFDSIDXXX-G1-8XX-01
						Reel/mm
Min	290mm	2.5mm	5mm	9.7mm	9.7mm	1000mm
Typ	300mm	2.0mm	20mm	10mm	10mm	1005mm
Max	310mm	3.0mm	35mm	10.3mm	10.3mm	1007mm



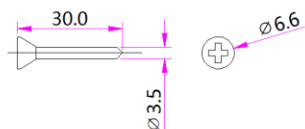
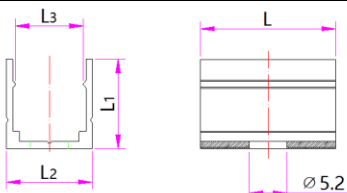
Dimension/mm	L1	L2	L3	W	H	GFD(S)IDXXX-G1-9XX-05 GFDSIDXXX-G1-8XX-05
						Reel/mm
Min	290mm	2.5mm	5mm	9.7mm	9.7mm	5000mm
Typ	300mm	2.0mm	20mm	10mm	10mm	5005mm
Max	310mm	3.0mm	35mm	10.3mm	10.3mm	5007mm



Dimension/mm	FX-GFDTID13-G1-IP65-ENDCAP KIT 2 PCS / FX-GFDSID13-G1-IP65-ENDCAP KIT 2 PCS		
	L1	L2	L3
Min	12.4mm	12.4mm	7.2mm
Typ	12.7mm	11.7mm	7.5mm
Max	13.0mm	13.0mm	7.8mm



Dimension/mm	FX-GFIDPM-G1-TT-13H12-1000 KIT 5 PCS		
	L	L2	L3
Min	998mm	145mm	4.7mm
Typ	1000mm	150mm	5.2mm
Max	1002mm	155mm	5.7mm



Dimension/mm	FX-GFIDPM-G1-TT-13H12-20 KIT 20 PCS			
	L1	L2	L3	L
Min	12.2mm	11.7mm	9.2mm	18.0mm
Typ	12.5mm	12.0mm	9.5mm	20.0mm
Max	12.8mm	12.3mm	9.8mm	22.0mm

Safety Information

- The LED module itself and all its components must not be mechanically stressed.
- Assembly must not damage or destroy conducting paths on the circuit board.

The LED module incorporates no protection against short circuits, overload or overheating.

In order to drive OSRAM LED-Modules safely, it is absolutely necessary to operate them with an electronically stabilized power supply protecting against short circuits, overload and overheating.

For dimming applications attention should be paid to specific references in "OPTOTRONIC® Technical Guide".

To also ease the luminaire/installation approval, electronic control gear for LED or LED modules must carry the CE mark.

In Europe the declarations of conformity must include the following standards:

CE: EN 61347-2-13, EN 55015, EN 61547 and EN 61000-3-2.

Also check for the mark of an independent authorized certification institute.

Please see the relevant application guides for more detailed information.

When using power supplies other than OPTOTRONIC® the following basic safety features are required, in addition to any other application specific concerns and local safety codes.

OSRAM OPTOTRONIC® electronic control gear complies with all relevant standards and guarantees safe operation.

- To avoid mechanical damage to the connecting cables, the module should be attached securely to the fixture. Heavy vibration should be avoided.
- Installation of LED modules with (power supplies) needs to be made with regard to all applicable electrical and safety standards. Only qualified personnel should be allowed to perform installation.
- Please ensure that the power supply is of adequate power to operate the total load.
- GinoLED Flex Diffuse White Indoor Version (TOP & SIDE) needs to connect with constant voltage DC driver which must have stable constant current (+/-10% tolerance suggested) output.
- Electrical contact is achieved with the contact cables.
- The design of the housing should be according to the IP standards in the application.
- Pay attention to standard ESD precautions when installing the module.
- If surge protection structure not within power supplier, a lightning protector should be needed additionally for outdoor application.
- t_c max value is 65 °C, higher t_c application is not recommended. t_p in remark are the same point with t_c .
- t_c value should be measured on the silicon tube directly above the t_c point on flex, (As shown in the figure), t_c point was marked on the flex only as reference point.
- Min bending radius is 60mm.

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Sales and technical support is given by the local OSRAM subsidiaries. Complete subsidiaries listing is available at OSRAM homepage.