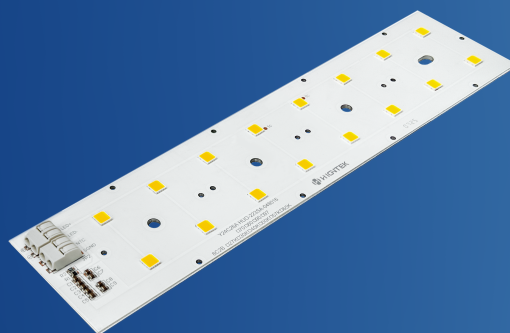




A 218lm/w
Ultra-High Luminous Efficacy Street Light Module

HUO-223SA-048016

LED Module Datasheet

The HIGNTEK HUO-223SA-048016 product is a high-performance LED module engineered for demanding outdoor illumination, including street lights, tunnel lighting, and industrial area applications. The product uses UHE-3030 led chip to make the module with exceptional brightness. Its modular design allows for easy installation and maintenance. The compact size and robust construction make it ideal for urban roads, industrial areas, and public spaces.

FEATURES AND BENEFITS

Efficacy and luminous flux of up to 218lm/W typical and 6951lm available

Available CCT/CRI options: 2700K-6500K(70 & 80 CRI)

Designed to be compatible with standard third party optics

MCPCB for efficient heat dissipation and mechanical robustness

CE, ROHS, ERP compliance

5-year limited guarantee

PRIMARY APPLICATIONS

Street Light

Flood and area lighting

Tunnel lighting



Performance Characteristics

Product Selection Guide

Table 1. Product performance of HIGNTEK HUO-223SA-048016 (T_p=25°C)

NOMINAL CCT	CRI [RA]	CURRENT [mA]	FORWARD VOLTAGE [V]	POWER [W]	LUMINOUS FLUX [lm]		EFFICACY [lm/W]	
					T _c = 25° C	T _c = 80° C	T _c = 25° C	T _c = 80° C
3000K	70	380	43.5	16.53	3354	3219	203	197
	70	480	43.9	21.07	4192	4025	199	193
	70	770	44.9	34.57	6464	6206	187	181
4000K	70	380	43.5	16.53	3606	3462	218	211
	70	480	43.9	21.07	4508	4328	214	208
	70	770	44.9	34.57	6951	6673	201	195
6500K	70	380	43.5	16.53	3570	3427	216	209
	70	480	43.9	21.07	4463	4284	212	205
	70	770	44.9	34.57	6881	6606	199	193
3000K	80	380	43.5	16.53	3119	2994	189	183
	80	480	43.9	21.07	3899	3743	185	179
	80	770	44.9	34.57	6012	5771	174	169
4000K	80	380	43.5	16.53	3354	3219	203	197
	80	480	43.9	21.07	4192	4025	199	193
	80	770	44.9	34.57	6464	6206	187	181
6500K	80	380	43.5	16.53	3320	3187	201	195
	80	480	43.9	21.07	4151	3984	197	191
	80	770	44.9	34.57	6400	6144	185	180

Notes for Table1:

1. T_c: temperature at which performance is specified measured at "T_c point".
2. HIGNTEK maintains a measurement tolerance of : Luminous flux: ± 7 %, CRI: ± 3.0,.
3. Measurement tolerance of CCT is ± 5%.
4. HUO-223SA-048016 Color temperature (2700K-6500K) is optional.

Product Code Information

Table 2. Product Code-HUO-223SA-048016-XXX

CRI [RA]	NOMINAL CCT	PRODUCT CODE
70	2700K	HUO-223SA-048016-277
	3000K	HUO-223SA-048016-307
	3500K	HUO-223SA-048016-357
	4000K	HUO-223SA-048016-407
	5000K	HUO-223SA-048016-507
	5700K	HUO-223SA-048016-577
	6500K	HUO-223SA-048016-657
80	2700K	HUO-223SA-048016-278
	3000K	HUO-223SA-048016-308
	3500K	HUO-223SA-048016-358
	4000K	HUO-223SA-048016-408
	5000K	HUO-223SA-048016-508
	5700K	HUO-223SA-048016-578
	6500K	HUO-223SA-048016-658

Electrical Characteristics

Table 3. Electrical characteristics for HIGNTEK HUO-223SA-048016

PARAMETER	SYMBOL	VALUE			UNIT	REMARK
		MIN.	TYP.	MAX.		
Operating Current	I_F	-	480	1500	mA	-
Operating Voltage	V_F	42.2	43.9	45.5	Vdc	$I_F = 480 \text{ mA}$
Power Consumption	P	20.26	21.07	21.84	W	$T_P = 65 \text{ }^\circ\text{C}$

Notes for Table3:

1. T_P : temperature at which performance is specified measured at "Tc point".
2. HIGNTEK maintains a tolerance of $\pm 0.1\text{V}$ on forward voltage measurements.

Absolute Maximum Ratings

Table 4. Maximum Operating Specification ($T_p=25^{\circ}\text{C}$)

PART NUMBER	PARAMETER	SYMBOL	UNIT	RATING
HUO-223SA-048016-XXX	Power Consumption	P	W	72
	DC Forward Current	I_F	mA	1500
	Operating Temperature	-	$^{\circ}\text{C}$	-40 to 85
	Storage Temperature	T_{Ctg}	$^{\circ}\text{C}$	-20 to 105
	ESD Sensitivity	-	KV	3
	Beam Angle	$\angle$	$^{\circ}$	120
	IP Grade	-	-	IP20
	Maximum Reverse Voltage	V_{BRM}	V	Module are not designed to be driven in reverse bias

Notes for Table4:

1. T_p : temperature at which performance is specified measured at " T_c point".

Characteristics Curves

$T_c [^{\circ}\text{C}]$	Flux [%]	Efficacy [%]
85	97	98
65	100	100
45	102	101
25	104	103
0	107	104

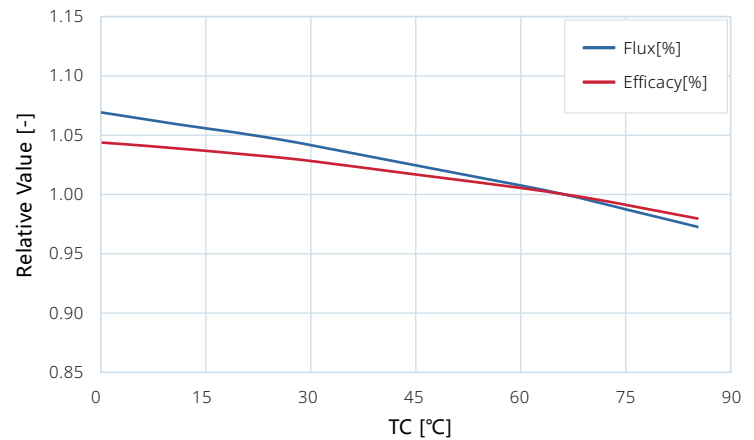


Figure 1. Typical normalized Flux and Efficacy vs. T_c temperature for HIGNTEK HUO-223SA-048016.

I [mA]	Flux [%]	Efficacy [%]
1500	271	80
480	100	100
380	80	102
265	51	104

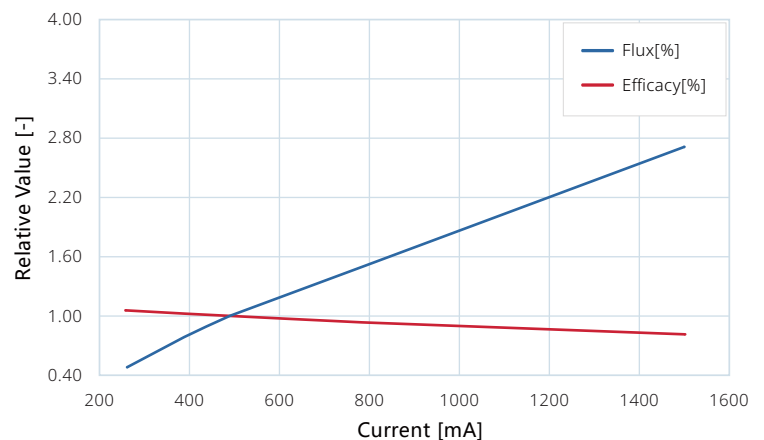


Figure 2. Typical normalized Flux and Efficacy vs. Current for HIGNTEK HUO-223SA-048016.

Mechanical Dimensions

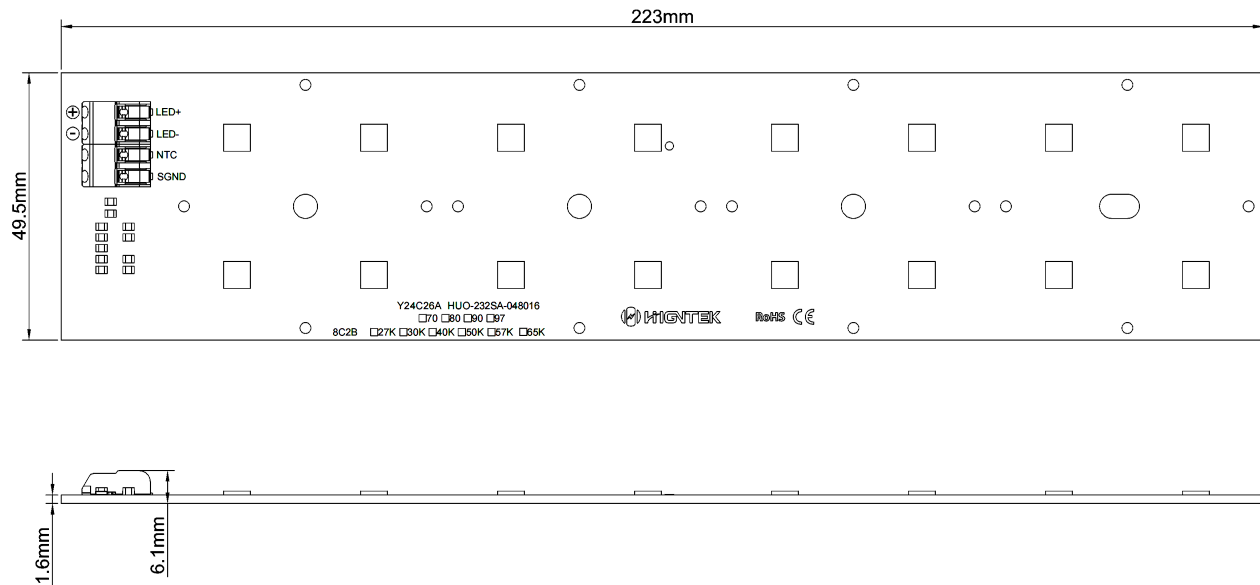


Figure 3. Mechanical Dimensions for HIGNTEK HUO-223SA-048016.

Notes for Figure 3:

1. Drawings are not to scale.
2. All dimensions are in millimeters.

Table 5. Bill of Materials for HIGNTEK HUO-223SA-048016.

COMPONENT	SPECIFICATION PARAMETERS	QUANTITY
LED:5050	LUMILEDS 5050 6V	16
PCB: MCPCB	223*49.5*1.6mm	1
Chip resistor	0805 390 1% 1/8W	1
Chip thermistor	0805	1
Chip capacitor	0805 1UF 50V X7R	9
SMD PCB terminal block	WAGO_2060-452/998-404	2

Notes for Table5:

1. Resistance specifications are adjusted according to different power.

Optional Branding (LED)



About HengXinYuan

Hengxinyuan is a professional lighting solutions company that helps customers deliver differentiated solutions to gain and maintain a competitive edge. The company's broad product portfolio includes a wide array of package and device choices such as CREE led, SAMSUNG led, LUMILEDS led, UHE led, Indoor lighting module and Outdoor lighting module. Hengxinyuan's LED products pursue high efficiency, high quality, and high reliability, and aim to meet the needs of customers to the greatest extent. With the supply of high-standard supply chain services as the driving force, they contribute to the development of global LED green and healthy lighting power.

