



A 210lm/w
Ultra-High Luminous Efficacy Street Light Module

HUO-223SA-048032

LED Moudle Datasheet

The HIGNTEK HUO-223SA-048032 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 210lm/W typical and 6842lm 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-048032 (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	450	44.5	20.03	3911	3559	195	184
	70	530	44.9	23.80	4538	4130	191	179
	70	780	45.9	35.80	6363	5790	178	167
4000K	70	450	44.5	20.03	4205	3827	210	197
	70	530	44.9	23.80	4880	4441	205	193
	70	780	45.9	35.80	6842	6226	191	180
6500K	70	450	44.5	20.03	4163	3788	208	195
	70	530	44.9	23.80	4831	4396	203	191
	70	780	45.9	35.80	6774	6164	189	178
3000K	80	450	44.5	20.03	3637	3310	182	171
	80	530	44.9	23.80	4221	3841	177	167
	80	780	45.9	35.80	5918	5385	165	155
4000K	80	450	44.5	20.03	3911	3559	195	184
	80	530	44.9	23.80	4538	4130	191	179
	80	780	45.9	35.80	6363	5790	178	167
6500K	80	450	44.5	20.03	3872	3523	193	182
	80	530	44.9	23.80	4493	4089	189	177
	80	780	45.9	35.80	6299	5732	176	165

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-048032 Color temperature (2700K-6500K) is optional.

Product Code Information

Table 2. Product Code-HUO-223SA-048032-XXX

CRI [RA]	NOMINAL CCT	PRODUCT CODE
70	2700K	HUO-223SA-048032-277
	3000K	HUO-223SA-048032-307
	3500K	HUO-223SA-048032-357
	4000K	HUO-223SA-048032-407
	5000K	HUO-223SA-048032-507
	5700K	HUO-223SA-048032-577
	6500K	HUO-223SA-048032-657
80	2700K	HUO-223SA-048032-278
	3000K	HUO-223SA-048032-308
	3500K	HUO-223SA-048032-358
	4000K	HUO-223SA-048032-408
	5000K	HUO-223SA-048032-508
	5700K	HUO-223SA-048032-578
	6500K	HUO-223SA-048032-658

Electrical Characteristics

Table 3. Electrical characteristics for HIGNTEK HUO-223SA-048032

PARAMETER	SYMBOL	VALUE			UNIT	REMARK
		MIN.	TYP.	MAX.		
Operating Current	I_F	-	530	1050	mA	-
Operating Voltage	V_F	42.2	44.9	45.5	Vdc	$I_F = 530 \text{ mA}$
Power Consumption	P	22.4	23.8	24.1	W	$T_P = 80 \text{ }^\circ\text{C}$

Notes for Table3:

1. T_c : 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-048032-XXX	Power Consumption	P	W	52
	DC Forward Current	I_F	mA	1050
	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 [%]
95	97	98
80	100	100
45	106	104
25	109	106
0	112	108

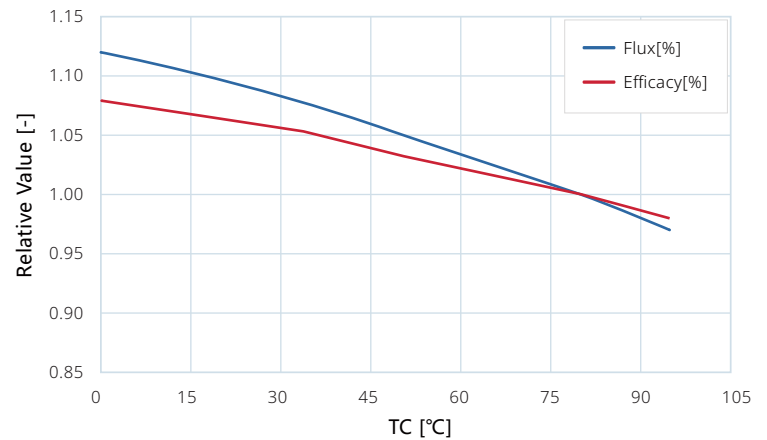


Figure 1. Typical normalized Flux and Efficacy vs. T_c temperature for HIGNTEK HUO-223SA-048032.

I [mA]	Flux [%]	Efficacy [%]
1050	271	80
780	140	93
530	100	100
450	80	102
265	51	104

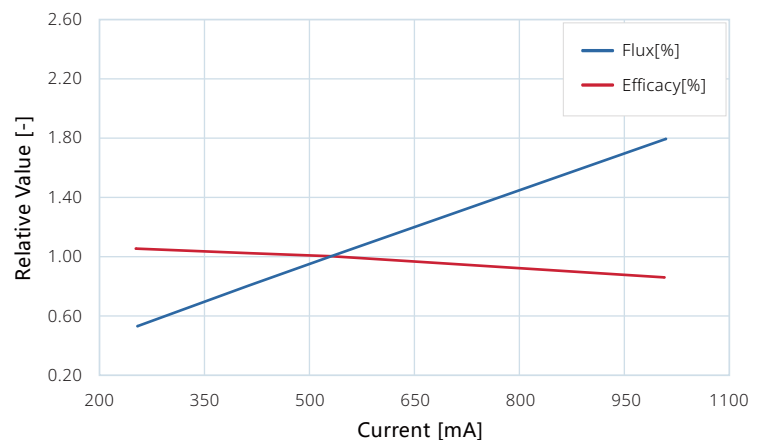


Figure 2. Typical normalized Flux and Efficacy vs. Current for HIGNTEK HUO-223SA-048032.

Mechanical Dimensions

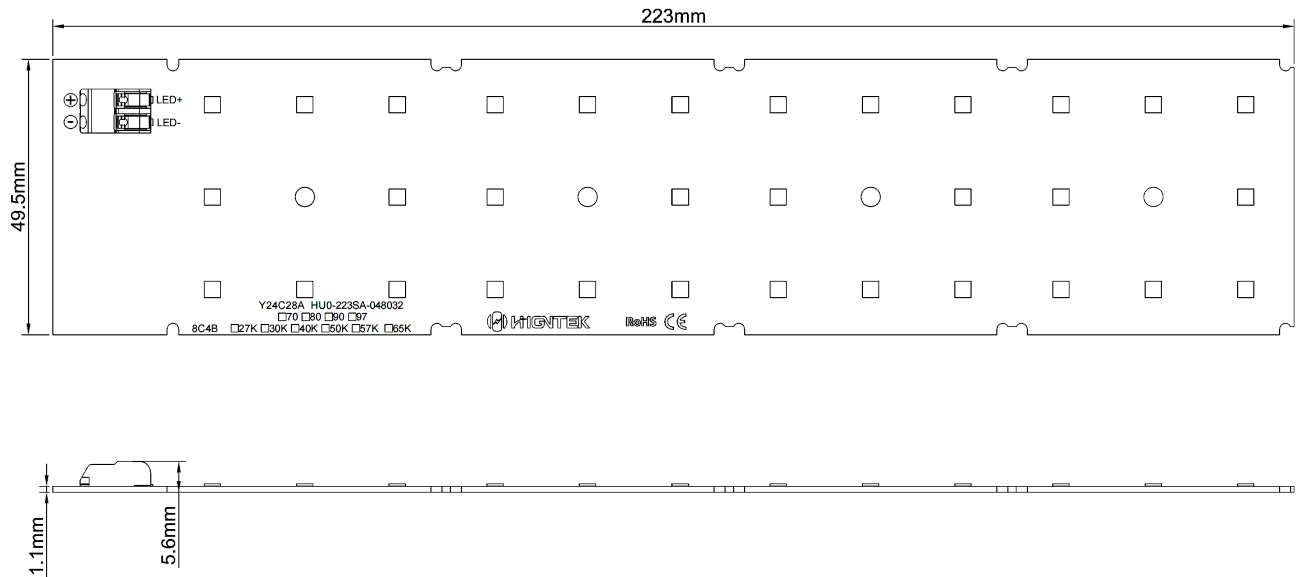


Figure 3. Mechanical Dimensions for HIGNTEK HUO-223SA-048032.

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-048032.

COMPONENT	SPECIFICATION PARAMETERS	QUANTITY
LED:3030	LUMILEDS 3030 6V	32
PCB: MCPCB	223*49.5*1.6mm	1
SMD PCB terminal block	WAGO_2060-452/998-404	1

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.

