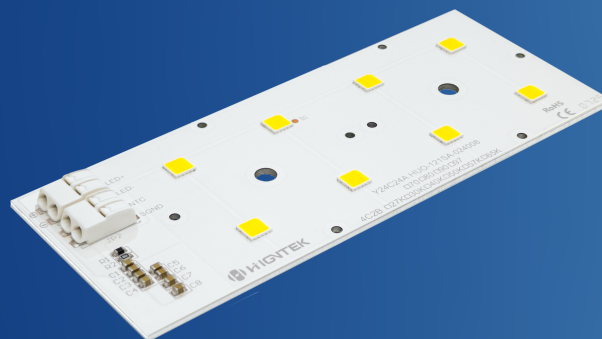




A 216lm/w
Ultra-High Luminous Efficacy Street Light Module

HUO-121SA-024008

LED Module Datasheet

The HIGNTEK HUO-121SA-024008 product is a high-performance LED module engineered for demanding outdoor illumination, including street lights, tunnel lighting, and industrial area applications. The product uses lumileds 5050 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 216lm/W typical and 6067lm 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-121SA-024008 (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 = 65° C	T _c = 25° C	T _c = 65° C
3000K	70	360	21.8	7.85	1574	1511	201	195
	70	450	21.9	9.86	1942	1864	197	191
	70	1500	23.9	35.85	5642	5416	157	152
4000K	70	360	21.8	7.85	1692	1624	216	209
	70	450	21.9	9.86	2088	2005	212	205
	70	1500	23.9	35.85	6067	5824	169	164
6500K	70	360	21.8	7.85	1675	1608	213	207
	70	450	21.9	9.86	2067	1984	210	204
	70	1500	23.9	35.85	6006	5766	168	163
3000K	80	360	21.8	7.85	1464	1405	186	180
	80	450	21.9	9.86	1806	1734	183	178
	80	1500	23.9	35.85	5247	5037	146	142
4000K	80	360	21.8	7.85	1574	1511	201	195
	80	450	21.9	9.86	1942	1864	197	191
	80	1500	23.9	35.85	5642	5416	157	152
6500K	80	360	21.8	7.85	1558	1496	198	192
	80	450	21.9	9.86	1922	1845	195	189
	80	1500	23.9	35.85	5586	5363	156	151

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-121SA-024008 Color temperature (2700K-6500K) is optional.

Product Code Information

Table 2. Product Code-HUO-121SA-024008-XXX

CRI [RA]	NOMINAL CCT	PRODUCT CODE
70	2700K	HUO-121SA-024008-277
	3000K	HUO-121SA-024008-307
	3500K	HUO-121SA-024008-357
	4000K	HUO-121SA-024008-407
	5000K	HUO-121SA-024008-507
	5700K	HUO-121SA-024008-577
	6500K	HUO-121SA-024008-657
80	2700K	HUO-121SA-024008-278
	3000K	HUO-121SA-024008-308
	3500K	HUO-121SA-024008-358
	4000K	HUO-121SA-024008-408
	5000K	HUO-121SA-024008-508
	5700K	HUO-121SA-024008-578
	6500K	HUO-121SA-024008-658

Electrical Characteristics

Table 3. Electrical characteristics for HIGNTEK HUO-121SA-024008

PARAMETER	SYMBOL	VALUE			UNIT	REMARK
		MIN.	TYP.	MAX.		
Operating Current	I_F	-	450	1500	mA	-
Operating Voltage	V_F	21.2	22.0	22.8	Vdc	$I_F = 450 \text{ mA}$
Power Consumption	P	9.54	9.90	10.26	W	$T_P = 65 \text{ }^\circ\text{C}$

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-121SA-024008-XXX	Power Consumption	P	W	36
	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

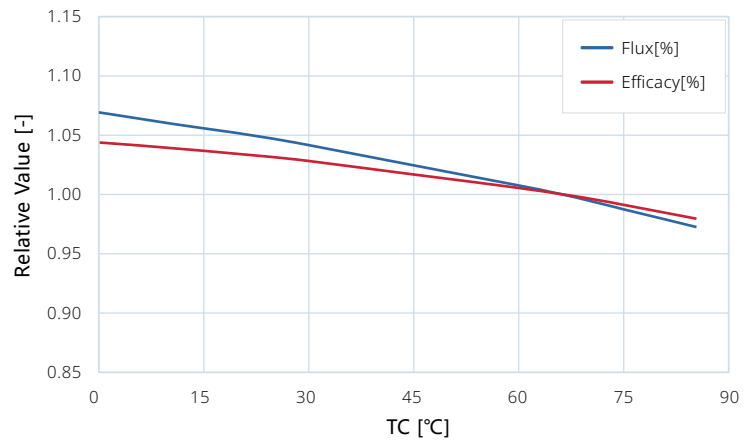


Figure 1. Typical normalized Flux and Efficacy vs. T_c temperature for HIGNTEK HUO-121SA-024008.

I [mA]	Flux [%]	Efficacy [%]
1500	291	80
450	100	100
360	81	102
225	51	105

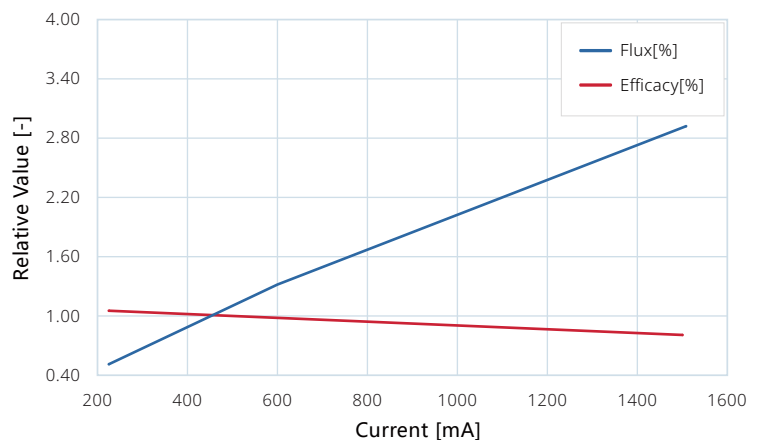


Figure 2. Typical normalized Flux and Efficacy vs. Current for HIGNTEK HUO-121SA-024008.

Mechanical Dimensions

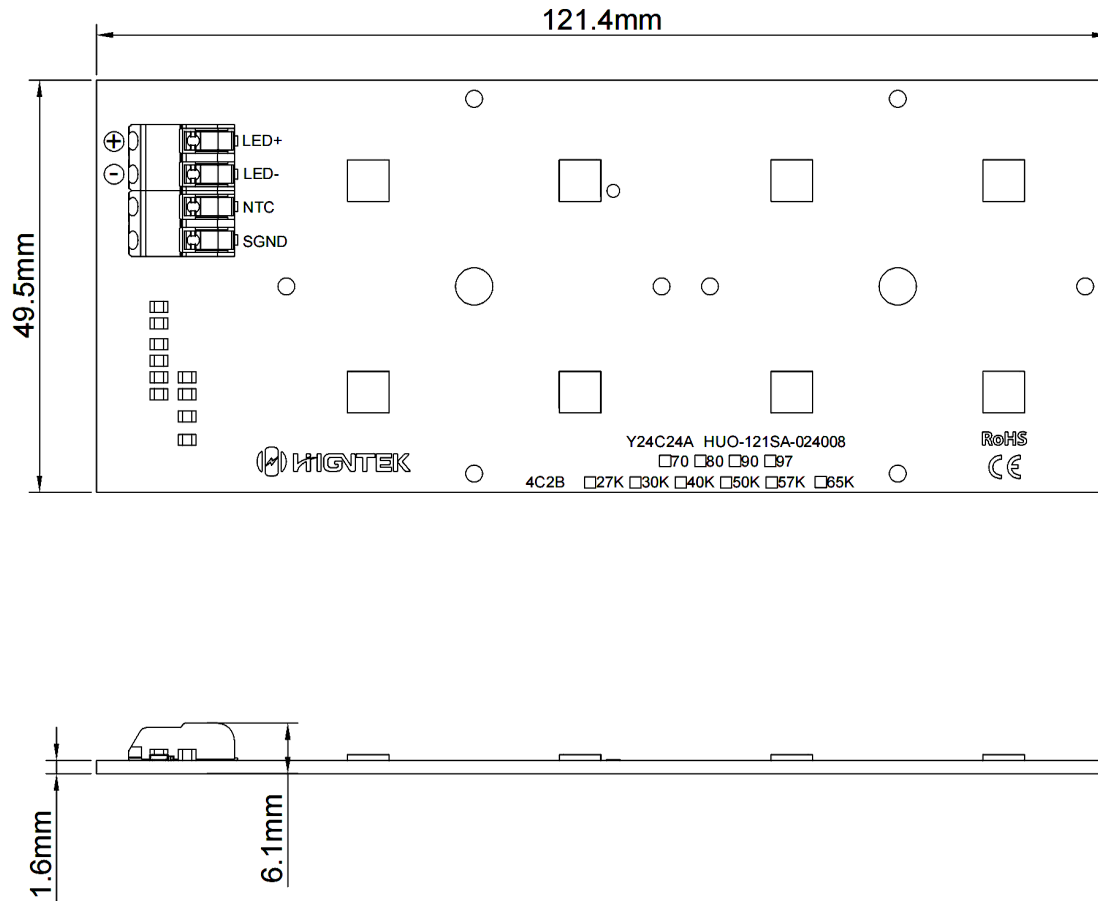


Figure 3. Mechanical Dimensions for HIGNTEK HUO-121SA-024008.

Notes for Figure 3:

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

Table 5. Bill of Materials for HIGNTEK HUO-121SA-024008.

COMPONENT	SPECIFICATION PARAMETERS	QUANTITY
LED:5050	LUMILEDS 5050 6V	8
PCB: MCPCB	121.4*49.5 *1.6mm	1
Chip resistor	0805 390 1% 1/8W	1
Chip thermistor	0805	1
Chip capacitor	0805 1UF 50V X7R	8
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.

