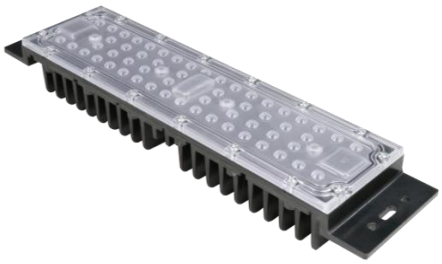
SGT

SGT-D252-xxxx Graphene-Polymer alloy LED Kits for SMD Modular Product Brief

Features VS Benefits

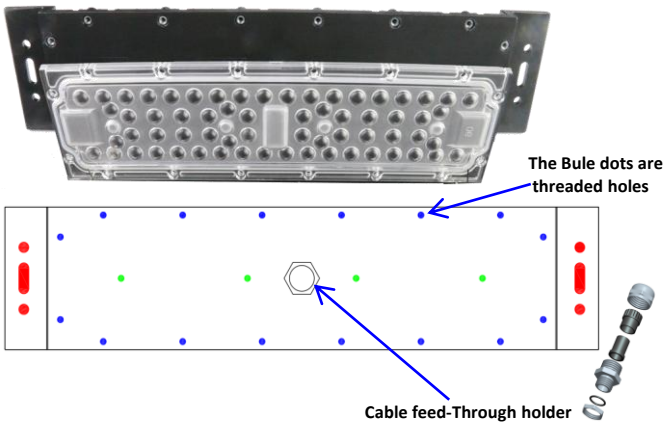


* Mechanical compatibility with direct mounting of the SMD products to the LED cooler and thermal performance matching the lumen packages.
* For flood light,street light,Garden lights,Tunnel lamp and high bay… designs from 3,500 to 7500 lumen.
* Thermal resistance range Rth 0.75°C/W.
* Product Standard size: L229-W69-H39.6mm .
* Graphene-polymer alloy is fabricated by low-temperature casting with high thermal conductivity.
* Graphene-Polymer alloy thermal conductivity is higher than ADC12 1.4 times.
* Standard colors - ash black
* Waterproof level designs from IP54 to IP65.
* With the SMD products (3030 , 2835 , 5050……): Bridgelux , Cree , Edison , Citizen , LG Innotek Lumileds , Luminus, Lumens , Nichia , Osram , Prolight Opto , Seoul , Samsung , Sharp.

Adura LED engine and radiator assembly directly Mounting Options

* Below you find an overview of SMD products which standard fit on the tLED series coolers.
* In this way mechanical after work and related costs can be avoided, and lighting designers can standardize their designs on a limited number of LED coolers.

Mounting Options



* MCPCB for the Green indicator marks.
  Direct mounting with machine screws M3x6.0mm;

*Threaded holes are already standard for formalizing. If you customize other threaded holes, you must contact Mingfa Tech.

*The bule indicator marks for Lens .
  Direct mounting with machine screws M3x8.0mm;

* Cable feed-through holder for the centre hole.

Not only consider waterproofness of the lens, but also on outside connecting line. Mingfa Tech can provide compatible waterproof connector with D252 Kits.
Features :
The claws and seals excellent design,can hold cable firmly and have a wider cable range.Resistant to salt water. weak acid, alcohol,oil,grease and common solvency.
1、Working temperature:Min -40℃ to Max 120℃.
2、Body material:Brass nickel plated。
3、Cable range Dia:3~6mm。
4、Protection degree:IP65
5、Water joint : PG7

Mingfa tech product number:
1、21000001-04 （M8）
2、21000002-04 （M10）

Order Information

Example:SGT-D252-56H1-S-60

Example:SGT- 1

1 **Part NO.**

MingFa recommends the use of a high thermal conductive interface between the LED module and the LED cooler.
Either thermal grease,a thermal pad or a phase change thermal pad thickness 0.1-0.15mm is recommended.

No.	Kits Type.	Lens & chips	Beam Angle	Apply to chip
1	D252-56H1-S-60	Lens=56PCS	60°	3030、2835
2	D252-56H1-S-151x81	Lens=56PCS	151*81°	3030、2835
3	D252-64H1-S-60	Lens=64PCS	60°	3030、2835
4	D252-64H1-S-90	Lens=64PCS	90°	3030、2835
5	D252-64H1-S-120	Lens=64PCS	120°	3030、2835
6	D252-64H1-S-151x81	Lens=64PCS	151*81°	3030、2835
7	D252-84H1-S-15	Lens=84PCS	15°	3030、2835
8	D252-84H1-S-25	Lens=84PCS	25°	3030、2835
9	D252-84H1-S-40	Lens=84PCS	40°	3030、2835

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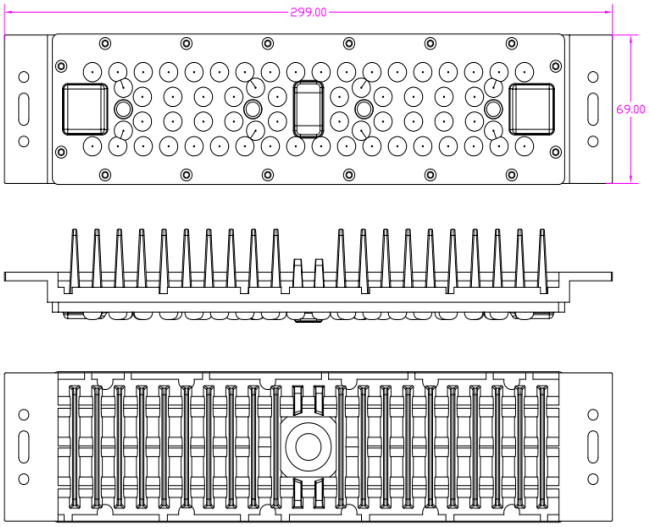
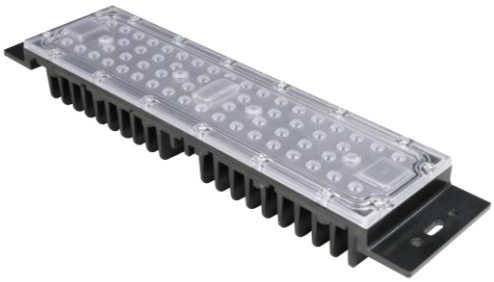
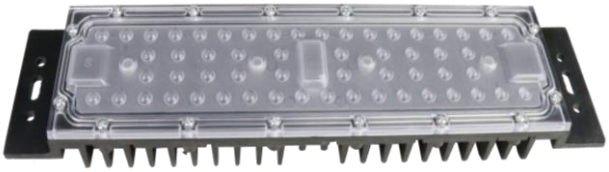
Drawings & Dimensions





Notes:
- Mentioned models are an extraction of full product range.
- For specific mechanical adaptations please contact MingfaTech.
- MingfaTech reserves the right to change products or specifications without prior notice.

Product display



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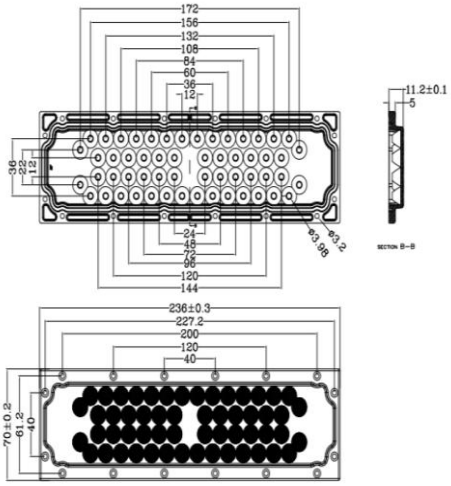
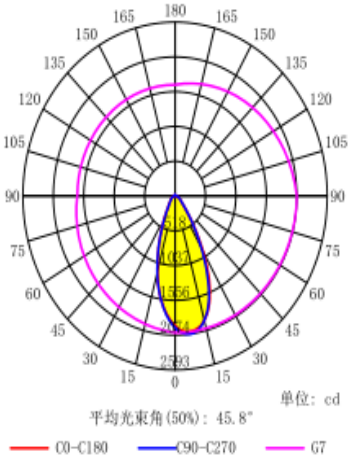
56H1 Lens Lighting Distribution



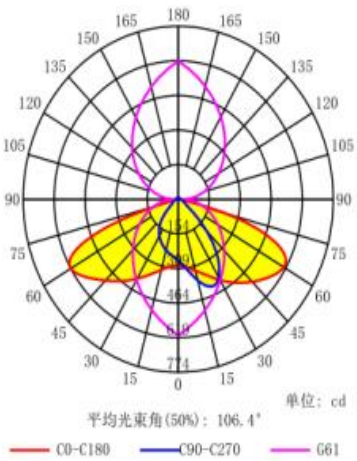
D252-56H1-xx Lens Drawing

IESNA Type



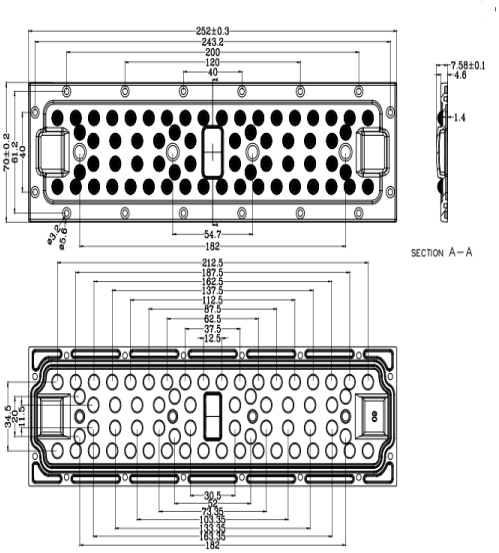
Kits Type.：D252-56H1-S-60

IESNA Type



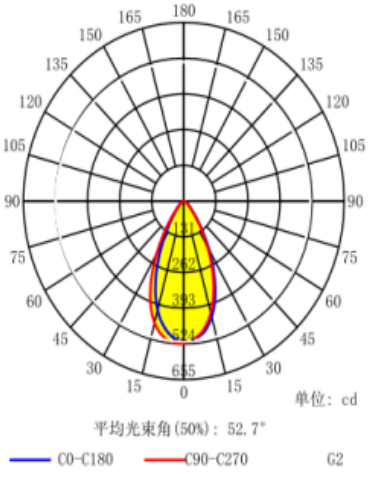
Kits Type.：D252-56H1-S-151x81

64H1 Lens Lighting Distribution



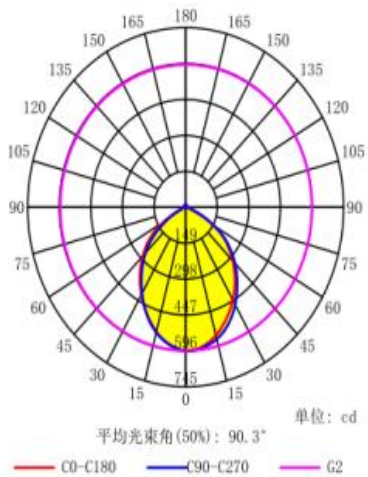
D252-64H1-xx Lens Drawing

IESNA Type



Kits Type.：D252-64H1-S-60

IESNA Type



Kits Type.：D252-64H1-S-90

Tel:+86-769-39023131
E-fax:+86-(020)28819702 ext:22122
Email:sales@mingfatech.com
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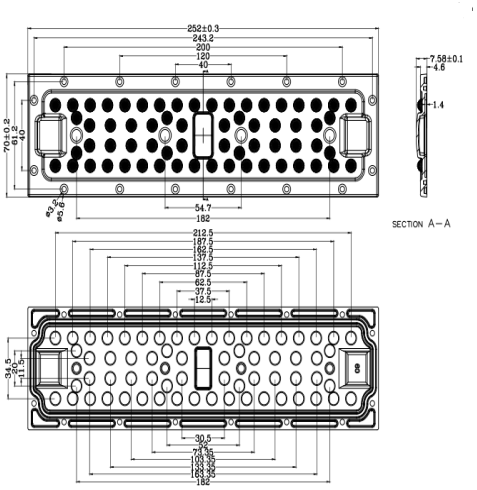
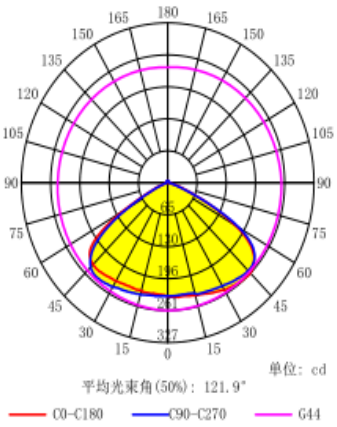
64H1 Lens Lighting Distribution



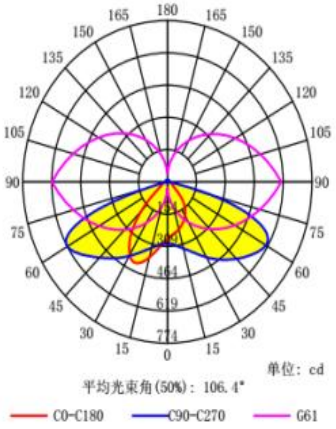
D252-64H1-xx Lens Drawing

IESNA Type



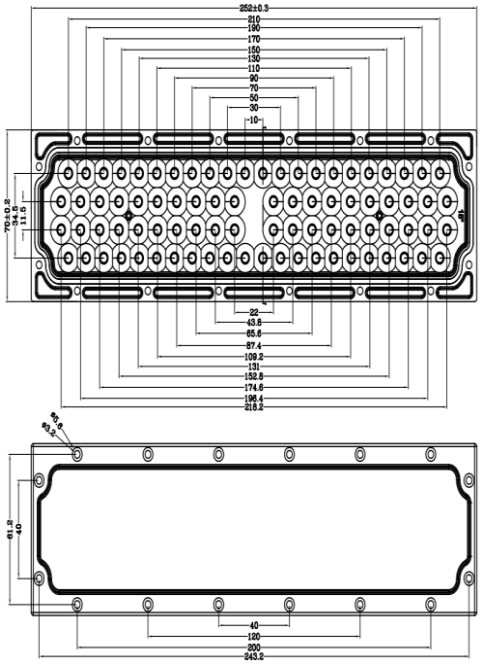
Kits Type.：D252-64H1-S-120

IESNA Type

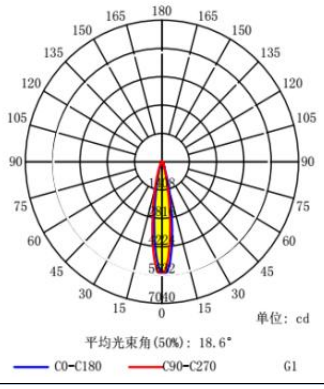


Kits Type.：D252-64H1-S-151x81

84H1 Lens Lighting Distribution

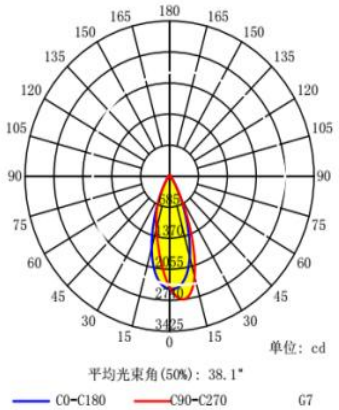


D252-81H1-xx Lens Drawing



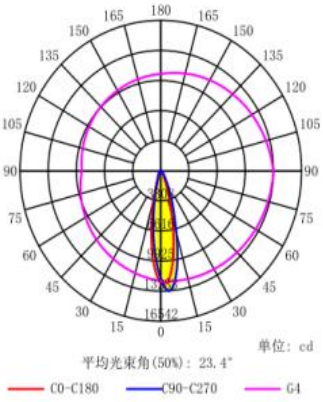
IESNA Type

Kits Type.：D252-84H1-S-15



IESNA Type

Kits Type.：D252-84H1-S-40



IESNA Type

Kits Type.：D252-84H1-S-25

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E-fax:+86-(020)28819702 ext:22122
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Http://www.heatsinkled.com
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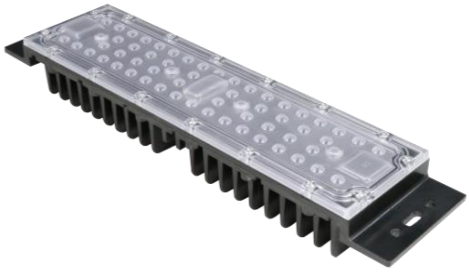
The thermal data table



Brand	**Mingfa Tech**
Series Name	SGT-D252 Kits Series
Seriest Number	SGT-D252-xxxx
Material	Graphene-polymer alloy
Color & Finishing	Ash Black
Certification	SGS, ROHS, WEEE
Size	L300.0-W70.0-H39.6mm
Weight(gr)	461
Dissipated Power Pd(W)	40.1w
SMD Module Power	50.0w
HeatsinkΘs-a²	234320
Heat Sink T Rise Above Ambient	1.36
Modular Types	SMD
For Environments	Indoor area，Outdoor area
For Lightings	High bay,Horticulture lights
For Application	Industrial & Warehouse,Horticulture,Outdoor,Street light,Flood light
For LED brands	Adura,Bridgelux,Cree,Edison,LG,Lumileds,Ledil,Nichia,Osram, Prolight Opto,Samsung,Seoul,Sharp,Tridonic,Vossloh Schwabe,Zhaga

* 3D files are avaliable in ParaSolid, STP and IGS on request

* The thermal resistance Rth is determined with a calibrated heat source of 14mm×14mm central placed on the heat sink, Tamb 40° and an open environment. Reference data @ heat sink to ambient temperature rise Ths-amb 50°C
The thermal resistance of a LED cooler is not a fix value and will vary with the applied dissipated power Pd

* Dissipated power Pd. Reference data @ heat sink to ambient temperature rise Ths-amb 50°C
The maximal dissipated power needs to be verified in function of required case temperature Tc or junction temperature Tj and related to the estimated ambient temperature where the light fixture will be placed
Please be aware the dissipated power Pd is not the same as the electrical power Pe of a LED module

To calculate the dissipated power please use the following formula: Pd = Pe x (1-ηL)
Pd - Dissipated power
Pe - Electrical power
ηL = Light effciency of the LED module

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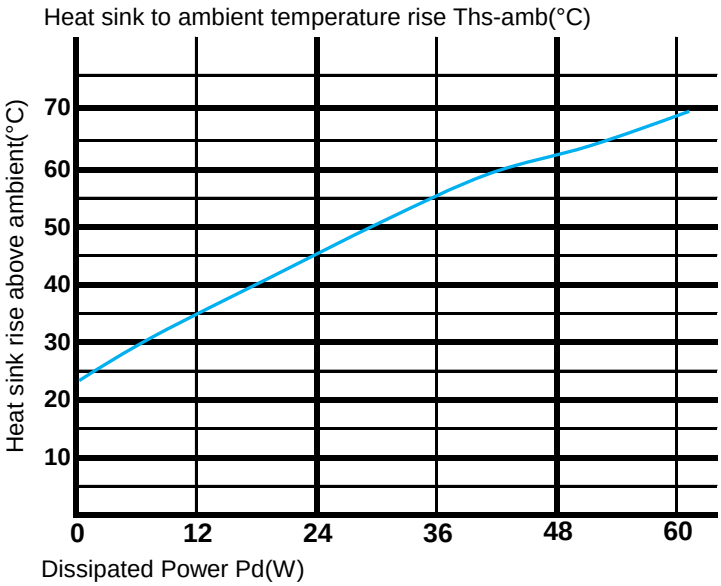
The thermal data table

Pd = Pe x (1-ηL)		Heat sink to ambient thermal resistance Rhs-amb (°C/W)	Heat sink to ambient temperature rise Ths-amb (°C)
		SGT-D252-xxxx	
Dissipated Power Pd(W)	12.0	2.58	33.50
	19.2	2.01	42.50
	28.4	1.53	49.10
	36.0	1.43	59.40
	40.1	1.36	63.10
	48.0	1.30	76.00



* Please be aware the dissipated power Pd is not the same as the electrical power Pe of a LED module.

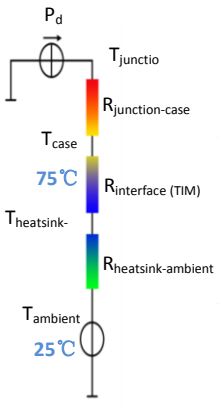
*To calculate the dissipated power please use the following formula: Pd = Pe x (1-ηL).

Pd - Dissipated power ; Pe - Electrical power ; ηL = Light effciency of the LED module;

*The aluminum substrate side of the package outer shell is thermally connected to the heat sink via TIM (Thermal interface material).

MingFa recommends the use of a high thermal conductive interface between the LED module and the LED cooler.

Either thermal grease,A thermal pad or a phase change thermal pad thickness 0.1-0.15mm is recommended.



*Thermal resistance is a heat property and a measurement of a temperature difference by which an object or material resists a heat flow.

Geometric shapes are different, the thermal resistance is different. Formula: θ ＝(Ths－Ta)/Pd

θ - Thermal Resistance [°C/W] ; Ths - Heatsink temperature ; Ta - Ambient temperature ;

*The thermal resistance between the junction section of the light-emitting diode and the aluminum substrate side of the package outer

shell is $R_{junction-case}$, the thermal resistance of the TIM outside the package is $R_{interface\ (TIM)}$ [°C/W], the thermal resistance with the

heat sink is $R_{heatsink-ambient}$ [°C/W], and the ambient temperature is $T_{ambient}$ [°C].

*Thermal resistances outside the package $R_{interface\ (TIM)}$ and $R_{heatsink-ambient}$ can be integrated

into the thermal resistance $R_{case-ambient}$ at this point.Thus, the following formula is also used:

$T_{junction}=(R_{junction-case}+R_{case-ambient})\cdot Pd+T_{ambient}$

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