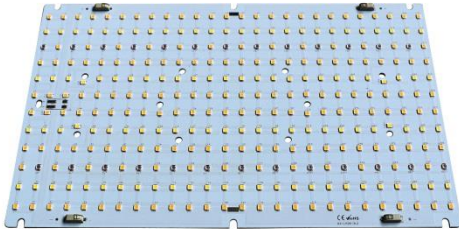


**Description:** RX-LM28-312-S2 Horticulture LED Module Medicinal plants grow lights, Compared with Samsung LM561H, LM301H lamp bead LED module, the unit price is reduced by 30-50%. using 312pcs 1W LED high efficiency lamp beads, a variety of LED combination medicinal plants dedicated spectrum, full spectrum, is the ideal medical plant planting lamp, after extensive practical planting, Can significantly improve the quality and harvest. Suitable for basement planting, plant tent planting, experimental planting, greenhouse planting.



1. 312 high-brightness 1W lamp beads, Derating for more reliable
2. High efficiency plant light Horticulture module, PPF efficiency 2.6 $\mu\text{mol} / \text{J}$
3. Aluminum substrate size: 11.25" x6.88" (286x175mm)
4. Heat sink size K1 12.8"x7.9"x 0.7";
5. Customize the size, power, spectrum, PAR output, PPF output you need
6. LED Module Input voltage: 32~37V, input current 1.5~3.9A
7. Service life 50,000 hours
8. CE RoHS FCC

Model	Dimension LxWxH	Spectral Wavelength	Photon PPF $\mu\text{mol}/\text{m}^2/\text{s}$	Luminous flux Radiation Power	Power Test Input	Comment
RX-LM28-312-S2	286x175x1.5mm 11.3"x6.9"x 0.6"	S2 3K106K2	341 $\mu\text{mol}$ @0.3m 23635Lx	9554Lm 138 $\mu\text{mol}/\text{s}$	1.6A @33.0V	2.6 $\mu\text{mol}/\text{J}$
			803 $\mu\text{mol}$ @0.3m 56126Lx	22984Lm 330 $\mu\text{mol}/\text{s}$	3.9A @35.7V	2.4 $\mu\text{mol}/\text{J}$
RX-LM28-312-S2-K1	325x201x68mm 12.8"x7.9"x 2.7"	S2 3K106K2	1399 $\mu\text{mol}$ @0.2m 98670Lx	20968Lm 301 $\mu\text{mol}/\text{s}$	AC 230V 136.5W	Includes heat sink & Meanwell ELG-150 32"x32" plant tents
			745 $\mu\text{mol}$ @0.3m 52078Lx			
			291 $\mu\text{mol}$ @0.5m 20323Lx			
RX-LM561-312-S1	286x175x1.5mm 11.3"x6.9"x 0.6"	S1 2700K+3500K+6500K	369 $\mu\text{mol}$ @0.3m 25921Lx	10544Lm 150 $\mu\text{mol}/\text{s}$	1.6A @33.3V	2.8 $\mu\text{mol}/\text{J}$ LM561C S6
			864 $\mu\text{mol}$ @0.3m 60724Lx	24140m 344 $\mu\text{mol}/\text{s}$	3.9A @36.3V	2.4 $\mu\text{mol}/\text{J}$ LM561C S6
RX-LM561-312-S1-K1	325x201x68mm 12.8"x7.9"x 2.7"	S1 2700K+3500K+6500K	1498 $\mu\text{mol}$ @0.2m 105262Lx	22193Lm 317 $\mu\text{mol}/\text{s}$	AC 230V 137.7W	Samsung LM561C S6 Includes heat sink & Meanwell ELG-150
			793 $\mu\text{mol}$ @0.3m 55787Lx			
			314 $\mu\text{mol}$ @0.5m 22059Lx			

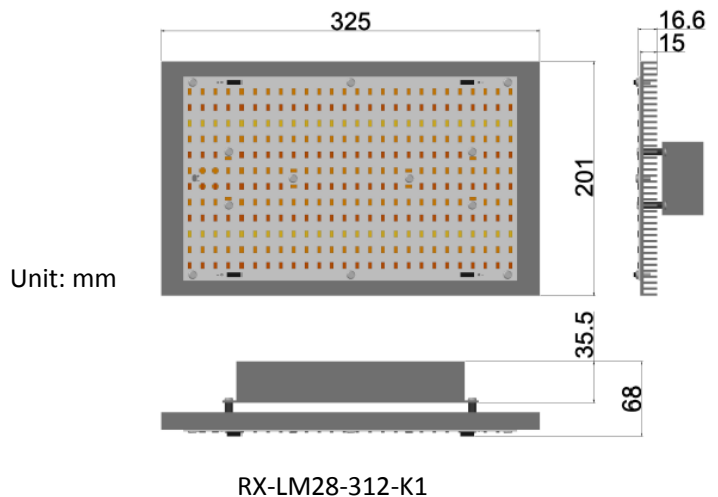
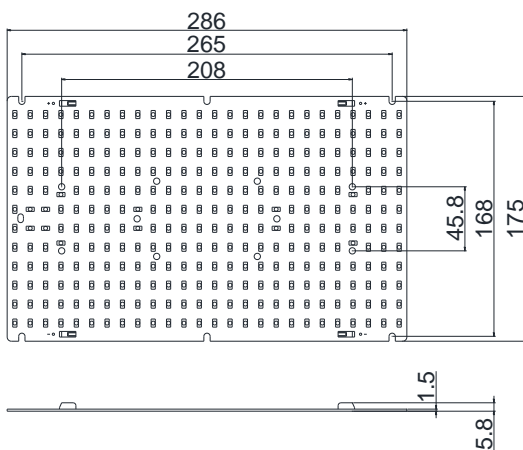
K1 Surface temperature rise  $T_c$  33 $^\circ\text{K}$  , Operating temperature: -30  $^\circ\text{C}$  ~ 40 $^\circ\text{C}$  , Lifespan: 50,000 hrs (Note:  $T_a \leq 25^\circ\text{C}$ )

Tolerance range for optical and electrical data:  $\pm 10\%$ .

Recommended irradiation distance 0.2-0.5 meters. K1 Suitable for 16"x16", 24" x24", 32" x32" grow tents

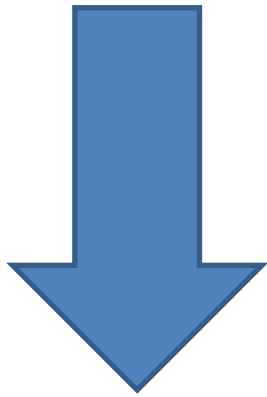
The above data is for reference only!

● Dimension:



- LM28-312-S2 high power, high luminous efficiency, low price,

PPE 2.6μmol/J    PPF 138μmol/S    at 1.6A 53W  
PPE 2.4μmol/J    PPF 330μmol/S    at 3.9A 139W



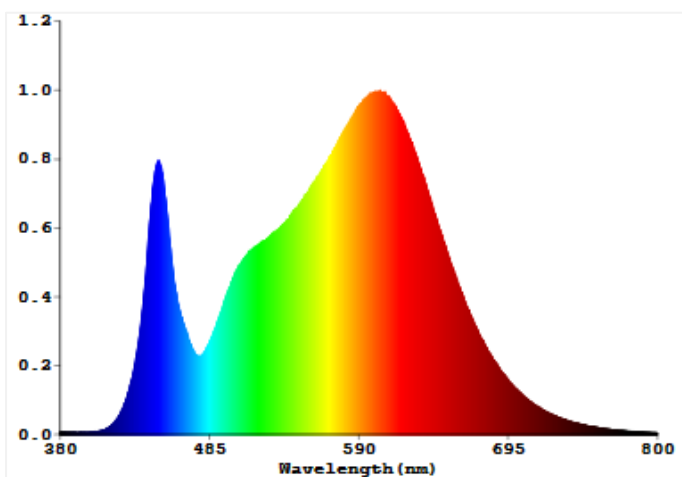
# 50% Price

RX-LM28-312-S2  
3.9A @35.7V 139W  
22984Lm 330umol/s  
803μmol/m<sup>2</sup>/s @0.3m 56126Lx

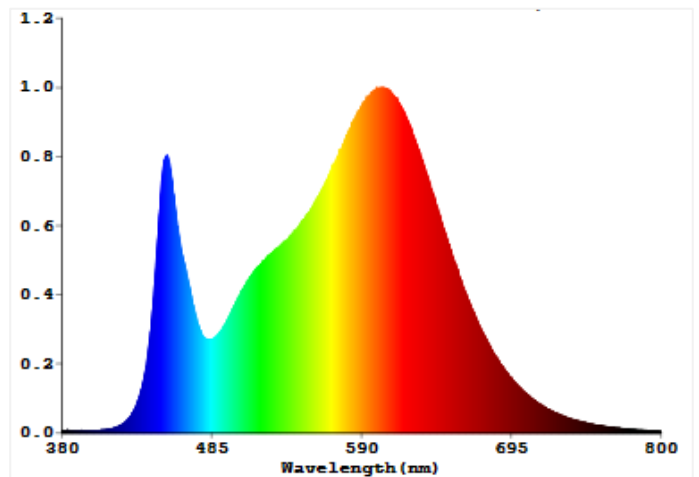
VS

RX-LM561-312-S1  
3.9A @36.3V 142W  
24140m 344umol/s  
864μmol @0.3m 60724Lx

- Design for balancing plant growth, horticultural full spectrum plant lamp module

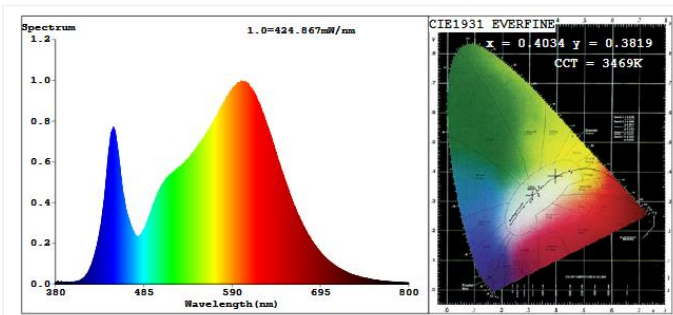


RX-LM561-312-S1 Light Recipes



RX-LM28-312-S2 Light Recipes

● Contrast test LM561C LED & LM28 LED Testing report



**Color Parameters:**

Chromaticity Coordinate:  $x=0.4034$   $y=0.3819$   $u'=0.2381$   $v'=0.5072$   
 CCT=3469K (Duv=-0.0035) Dominant WL:Ld =582.6nm Purity=35.7%  
 Ratio:R=21.0% G=75.8% B=3.3% Peak WL:Lp=601.0nm FWHM=144.6nm  
 Render Index:Ra=85.2 AvgR=80.2  
 R1 =84 R2 =92 R3 =96 R4 =85 R5 =85 R6 =90 R7 =85  
 R8 =65 R9 =16 R10=81 R11=85 R12=76 R13=86 R14=98 R15=78

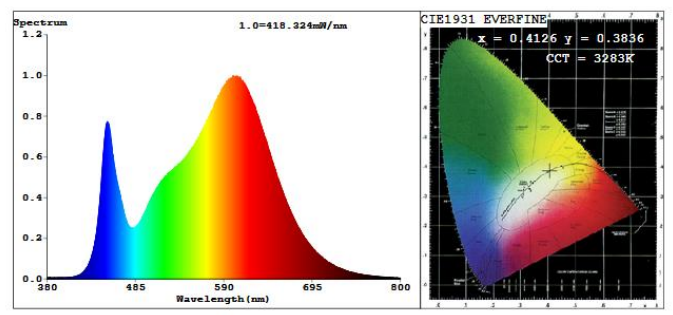
**Photo Parameters:**

Flux = 22193 lm Eff. : 161.12 lm/W Fe = 68.73 W  
 Scotopic:34398 S/P:1.5499  
 Photosynthetic:PPF:316.55umol/s PAR WATT:66948mW(400-700nm)

**Electrical parameters:**

V = 231.52 V I = 0.6211 A P = 137.7 W PF = 0.9578  
 LEVEL:OUT WHITE:ANSI\_3500K

RX-LM561-312-S1-K1 PPF Test Page 9



**Color Parameters:**

Chromaticity Coordinate:  $x=0.4126$   $y=0.3836$   $u'=0.2435$   $v'=0.5093$   
 CCT=3283K (Duv=-0.0046) Dominant WL:Ld =583.8nm Purity=38.9%  
 Ratio:R=22.0% G=74.7% B=3.3% Peak WL:Lp=601.3nm FWHM=134.3nm  
 Render Index:Ra=85.1 AvgR=80.4  
 R1 =85 R2 =94 R3 =95 R4 =83 R5 =86 R6 =92 R7 =83  
 R8 =63 R9 =17 R10=86 R11=83 R12=74 R13=88 R14=98 R15=79

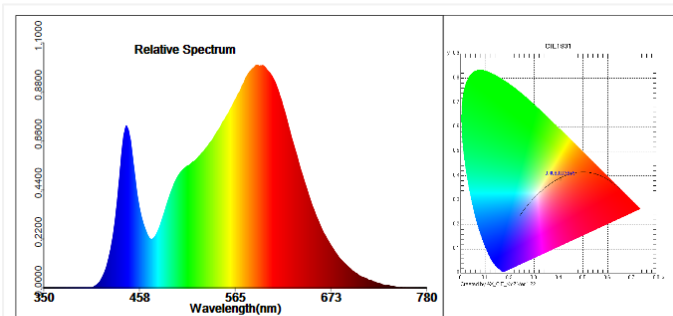
**Photo Parameters:**

Flux = 20968 lm Eff. : 153.58 lm/W Fe = 64.92 W  
 Scotopic:31680 S/P:1.5109  
 Photosynthetic:PPF:300.89umol/s PAR WATT:63230mW(400-700nm)

**Electrical parameters:**

V = 231.57 V I = 0.6158 A P = 136.5 W PF = 0.9574  
 LEVEL:OUT WHITE:ANSI\_3500K

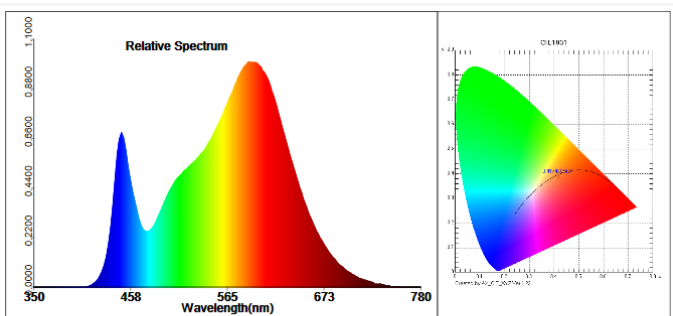
RX-LM28-312-S2-K1 PPF Test Page 10



**Test parameter:**

E= 55787.4 lx E(fc)=5184.7 fc  
 CIE x= 0.4080 CIE y= 0.3855 CIE u'=0.2396 CIE v'=0.5095  
 Tc=3398 K Lp=601.0 nm HW=146.6 nm Ld=582.5 nm  
 Pur=38.1 % Ratio\_R=21.4 % Ratio\_G=75.5 % Ratio\_B=3.1 %  
 Duv=-0.00287  
 Ra=85.7 R1= 85 R2= 92 R3= 97  
 R4= 85 R5= 86 R6= 90 R7= 85  
 R8= 65 R9= 18 R10= 82 R11= 86  
 R12= 78 R13= 87 R14= 99 R15= 78  
 SDCM= 2.9(3500K/White)  
 White Class:OUT  
 E1=167.26 W/m2 E2=170.26 W/m2 PPF=792.77 μmol/(m·s)  
 Ech-A=23.854 W/m2 Ech-B=30.603 W/m2 Ef=2.9806 W/m2  
 Eb=30.906 W/m2 Ey=75.208 W/m2 Er=61.297 W/m2  
 Ep=147.68 Wphyto/m2 Erb\_Ratio=1.9833  
 PPFDF=1.8001E+001 μmol/(m2·s)

RX-LM561-312-S1-K1 PPF Test Page 21

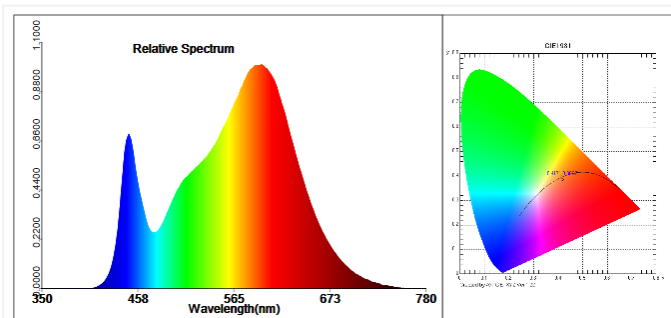


**Test parameter:**

E= 52077.8 lx E(fc)=4839.94 fc  
 CIE x= 0.4174 CIE y= 0.3867 CIE u'=0.2453 CIE v'=0.5114  
 Tc=3212 K Lp=601.0 nm HW=133.3 nm Ld=583.7 nm  
 Pur=41.3 % Ratio\_R=22.4 % Ratio\_G=74.4 % Ratio\_B=3.2 %  
 Duv=-0.00415  
 Ra=85.2 R1= 85 R2= 94 R3= 95  
 R4= 83 R5= 86 R6= 92 R7= 83  
 R8= 63 R9= 17 R10= 87 R11= 84  
 R12= 76 R13= 88 R14= 98 R15= 79  
 SDCM= 6.4(3500K/White)  
 White Class:OUT  
 E1=156.24 W/m2 E2=159.18 W/m2 PPF=745.21 μmol/(m·s)  
 Ech-A=21.586 W/m2 Ech-B=28.866 W/m2 Ef=2.9252 W/m2  
 Eb=27.257 W/m2 Ey=69.034 W/m2 Er=60.086 W/m2  
 Ep=138.59 Wphyto/m2 Erb\_Ratio=2.2044  
 PPFDF=1.7676E+001 μmol/(m2·s)

RX-LM28-312-S2-K1 PPF Test Page 22

● Testing report



Test parameter:

E= 97669.7 lx      E(tc)=9077.11 fc  
 CIE x= 0.4171      CIE y= 0.3867      CIE u'=0.2451      CIE v'=0.5113  
 Tc=3218 K      Lp=607.0 nm      HW=134.3 nm      Ld=583.7 nm  
 Pur=41.2 %      Ratio\_R=22.4 %      Ratio\_G=74.4 %      Ratio\_B=3.2 %  
 Duv=-0.00411

Ra=85.4      R1= 85      R2= 94      R3= 95  
 R4= 84      R5= 86      R6= 92      R7= 83  
 R8= 63      R9= 18      R10= 86      R11= 84  
 R12= 76      R13= 88      R14= 98      R15= 79

SDCM= 6.3(3500K/White)  
 White Class:OUT

E1=293.32 W/m2      E2=299.01 W/m2      PPFD=1399.1 μmol/(m·s)  
 Ech-A=40.57 W/m2      Ech-B=54.219 W/m2      Ef=5.6262 W/m2  
 Eb=51.198 W/m2      Ey=129.44 W/m2      Er=112.94 W/m2  
 Ep=260.18 W/phyto/m2      Erb\_Ratio=2.206  
 PPFDF=3.3993E+001 μmol/(m2·s)

RX-LM28-312-S2-K1 PPFD Test Page 19

Measurements	
EH1	Max 51.7 °C
	Min 19.2 °C
	Average 23.9 °C
Sp1	21.5 °C
Sp2	51.1 °C
Sp3	51.6 °C
Sp4	51.1 °C
Sp5	19.9 °C
Sp6	19.5 °C
Sp7	19.7 °C
Sp8	20.4 °C
Sp9	20.3 °C

Parameters	
Emissivity	0.95
Refl. temp.	20 °C

2019/1/25 11:47:27  
 LM561C-312-K1.jpg

2019/1/25 11:47:27  
 LM561C-312-K1.jpg

Temperature test