

Description:

RX-PT5-900 plant factory special economic plant light tube, used for shelf structure plant factory, PPFD is increased by 70% compared to T5 and T8 lamps, Build your plant farm with fewer lights! New design patent product waterproof IP64, suitable for the cultivation of seedlings and vegetable vegetative growth, is ideal for plant factories and home planting.



1. Urban Vertical Agriculture - High cost performance plant factory grow tube, Patented one-piece condenser lens, Patent No.: ZL201820677848
2. PPFD is increased by 70% (90D) compared to T5 and T8 lamps, Build your plant farm with fewer lights!
3. 90D is recommended for Tissue culture seedlings, and 60D is used for vegetative growth of leafy vegetables
4. No flicker, long-life LED power supply, PF> 0.9, Meet the safety requirements around the world
5. Waterproof IP64, Water splashing against the enclosure from shall have no harmful effect
6. Input: AC100 ~240V, Rated power 18W
7. CE RoHS FCC

Model	Dimension	CRI & Color temperature	Photon PPFD $\mu\text{mol}/\text{m}^2/\text{s}$	Luminous flux Radiation Power	Power Test Input	Comment
RX-PT5-900-90D-6K7R1	22x25x900mm	Ra 89 5700K	151 μmol @0.2m 10006Lx	Flux: 2695Lm PPF: 40.8 $\mu\text{mol}/\text{s}$ PAR: 8943mW	17W AC230V	Tissue culture, Nursery, rhizome plants Aquarium
			94 μmol @0.3m 6224Lx			
			47 μmol @0.5m 3115Lx			
RX-PT5-900-90D-F3		Ra 90 3000K	131 μmol @0.2m 8512Lx	Flux: 2242Lm PPF: 35 $\mu\text{mol}/\text{s}$ PAR: 7292mW	18W AC230V	Leaf vegetable production
			81 μmol @0.3m 5194Lx			
			39 μmol @0.5m 2513Lx			
RX-PT5-900-90D-G1		Ra 12 9000K	83 μmol @0.2m 2350Lx	Flux: 729Lm PPF: 25 $\mu\text{mol}/\text{s}$ PAR: 5206mW	16W AC230V	Ornamental plants Red is redder, green is greener, blue is bluer
			56 μmol @0.3m 1495Lx			
			27 μmol @0.5m 704Lx			

Surface temperature rise T_c 23 K, Operating temperature: $-30^\circ\text{C} \sim 40^\circ\text{C}$, Lifespan: 25,000 hours (Note: $T_a \leq 25^\circ\text{C}$)

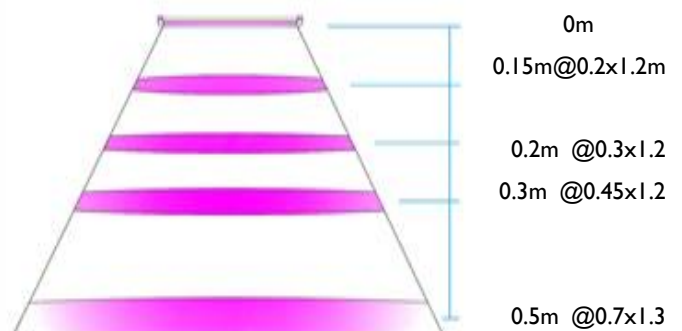
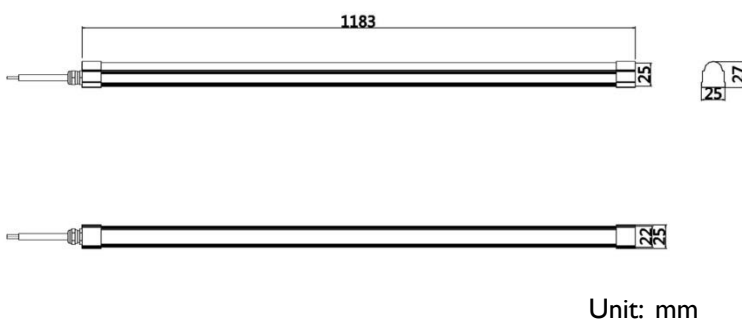
Tolerance range for optical and electrical data: $\pm 10\%$.

Beam angle: 70° Recommended irradiation distance: 0.2~0.5m (Tissue culture and nursery) 0.1~0.3m (Vegetable production)

The above data is for reference only!

Dimension:

90D Depth distance & Coverage:



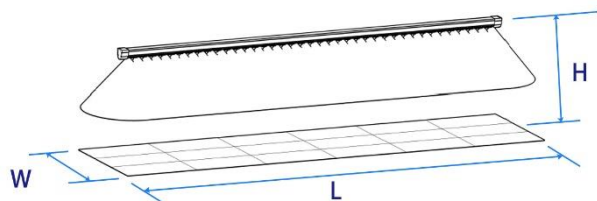
- Patented one-piece condenser lens, Patent No.: ZL201820677848, Urban Vertical Agriculture - High cost performance plant factory grow LED tube



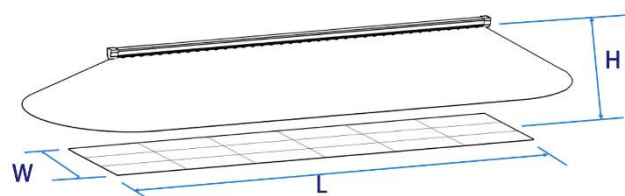
Optional illuminating angle lens LED plant grow tube
Patent number ZL201820677848

- 50% increase in PPFD compared to T5 and T8 lamps, building plant factories with fewer lamps
Single comparison test, the test height is 0.2m, the radiation area is 0.3x1m, and the 90D product is 79% higher than the 120D product.

90D



120D



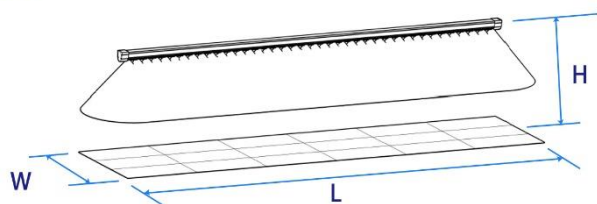
69	93	103	102	92	66
85	123	131	129	117	81
69	101	104	97	93	64
90D Test W 0.3m, L 1m, H 0.2m					
18 test point average PPFD 95.5 μ mol/m ² /s					

45	52	54	48	45	32
50	78	80	75	72	49
44	52	53	50	49	32
120D Test W 0.3m, L 1m, H 0.2m					
18 test point average PPFD 53.3 μ mol/m ² /s					

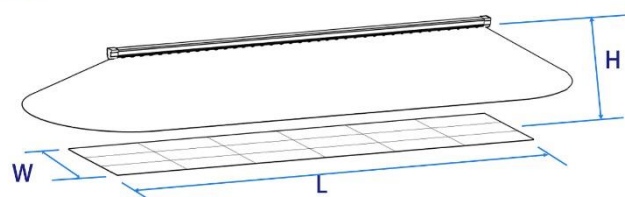
90D compared to 120D, PPFD increased by 79%

- Single comparison test, test height 0.3m, radiation area 0.45x1.2m, 90D products than 120D products, PPFD increased by 72%.

90D



120D



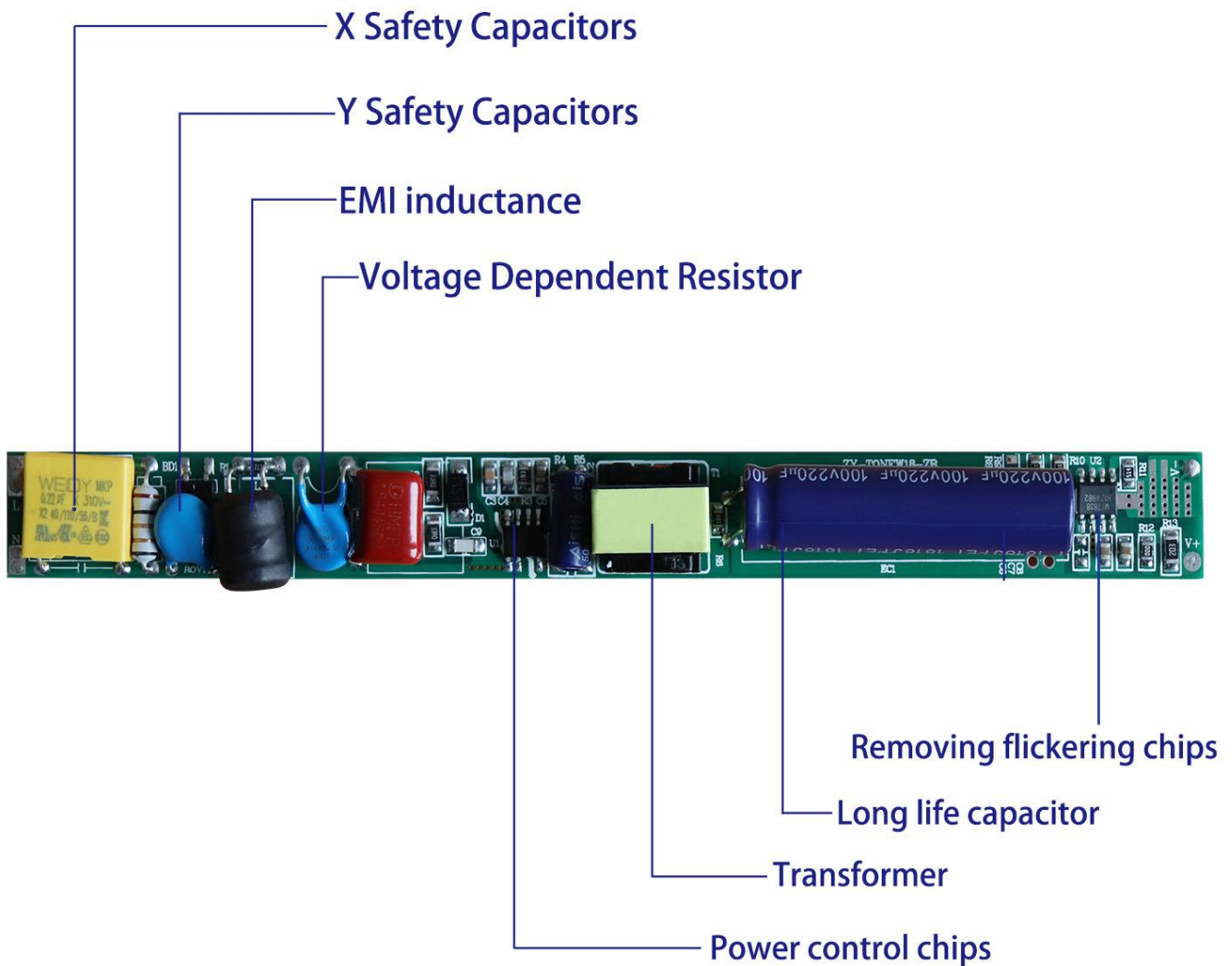
38	50	59	57	53	38
51	72	79	78	72	53
46	63	71	68	60	42
90D Test W 0.3m, L 1.2m, H 0.2m					
18 test point average PPFD 50.6 μ mol/m ² /s					

21	29	31	31	27	22
32	47	51	50	47	35
25	33	39	36	27	27
120D Test W 0.3m, L 1.2m, H 0.2m					
18 test point average PPFD 33.9 μ mol/m ² /s					

90D compared to 120D, PPFD increased by 72%

*90D and 120D, the difference is: 90D uses a patented one-piece lens structure, 120D uses a common transparent lampshade.

- No flicker, long-life LED power supply, PF> 0.9, Meet the safety requirements around the world



No flicker, Long life, High PF, High quality LED power

No flicker, Long life, High PF, High quality LED power

Removing flickering chips

Long life capacitor

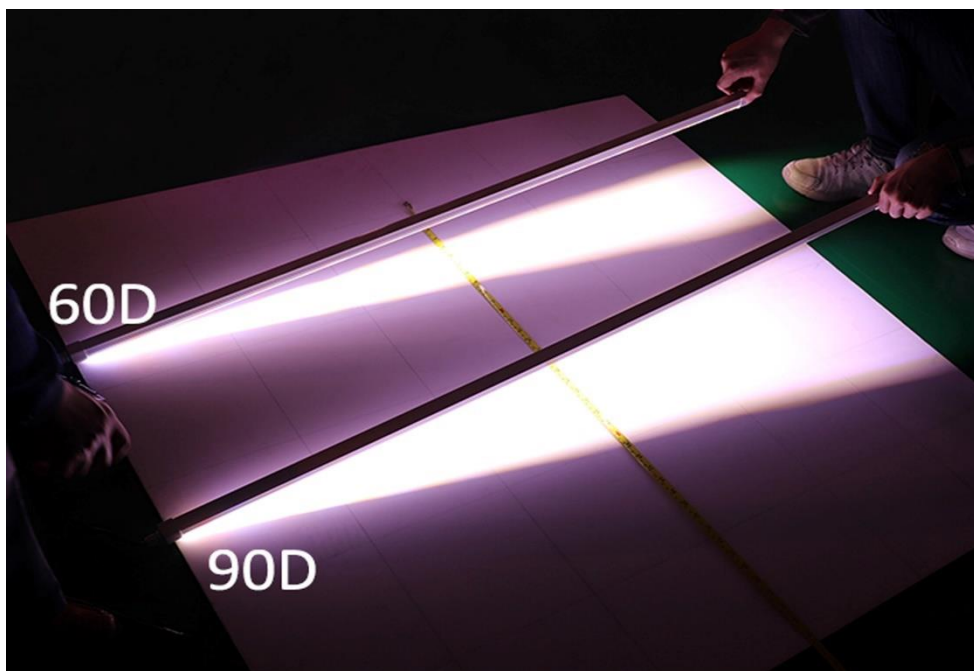
Transformer

Power control chips

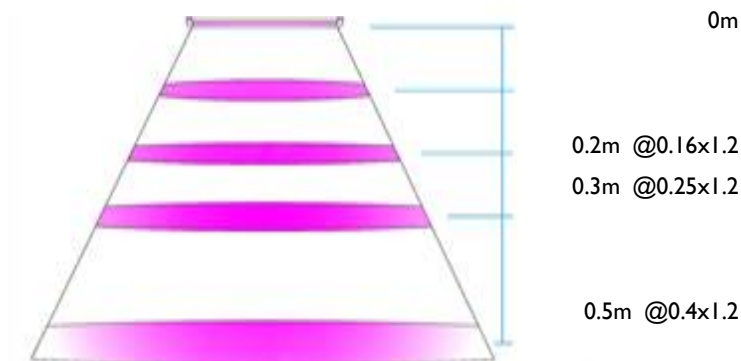
X Safety Capacitors Y Safety Capacitors

EMI inductance Voltage Dependent Resistor

- Optional lighting angle, you can customize 60D products, lighting angle 45°, PPFD increase 80%, 60D is recommended for the vegetative growth, and 90D is recommended for the cultivation of seedlings.

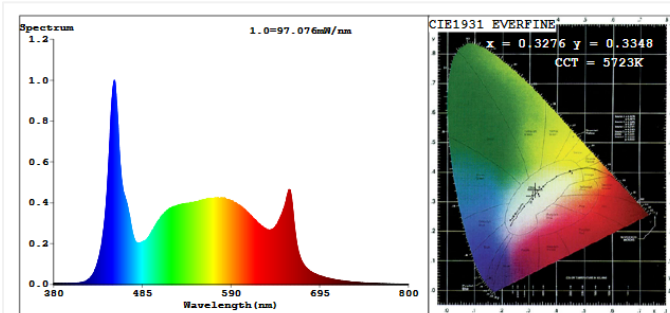


60D Depth distance & Coverage:



Model	Dimension	CRI & Color temperature	Photon PPFD $\mu\text{mol}/\text{m}^2/\text{s}$	Luminous flux Radiation Power	Power Test Input	Comment
RX-PT5-900-60D-6K7R I	22x25x900mm	Ra 85 5700K	208 μmol @0.2m 13750Lx	Flux: 2508Lm PPF: 38 $\mu\text{mol}/\text{s}$ PAR: 8345mW	17.2W AC230V	Tissue culture, Nursery, rhizome plants Aquarium
			133 μmol @0.3m 8746Lx			
			60 μmol @0.5m 3987Lx			
RX-PT5-900-60D-G I	22x25x900mm	Ra 13 9000K	123 μmol @0.2m 3191Lx	Flux: 642Lm PPF: 23 $\mu\text{mol}/\text{s}$ PAR: 642mW	16W AC230V	Ornamental plants Red is redder, green is greener, blue is bluer
			74 μmol @0.3m 1946Lx			
			34 μmol @0.5m 895Lx			

● Testing report



Color Parameters:

Chromaticity Coordinate: x=0.3276 y=0.3348/u'=0.2060 v'=0.4736
 CCT=5723K (Duv=-0.0010) Dominant WL:Ld=495.0nm Purity=1.8%
 Ratio:R=15.2% G=79.5% B=5.3% Peak WL:Lp=452.0nm FWHM=16.9nm
 Render Index:Ra=88.7 AvgR=84.3
 R1=88 R2=92 R3=92 R4=89 R5=88 R6=86 R7=92
 R8=83 R9=53 R10=79 R11=88 R12=62 R13=89 R14=96 R15=88

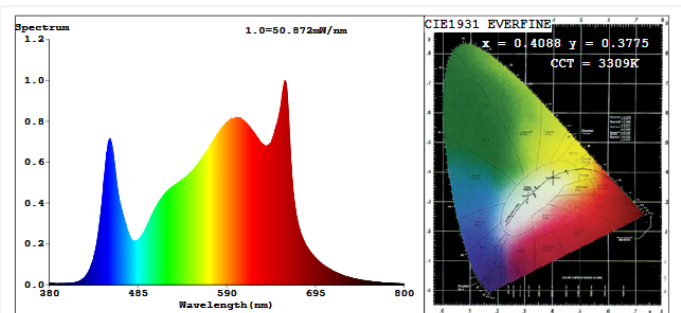
Photo Parameters:

Flux = 2690 lm Eff. : 156.99 lm/W Fe = 9.032 W
 Scotopic:5780 S/P:2.149
 Photosynthetic:PPF:40.82umol/s PAR WATT:8921.5mW(400-700nm)

Electrical parameters:

V = 231.41 V I = 0.07956 A P = 17.13 W PF = 0.9305
 LEVEL:OUT WHITE:ANSI_5700K

RX-PT5-900-D90-6K7R1 17W LED tube PPF TEST



Color Parameters:

Chromaticity Coordinate: x=0.4088 y=0.3775/u'=0.2436 v'=0.5062
 CCT=3309K (Duv=-0.0066) Dominant WL:Ld=584.7nm Purity=36.0%
 Ratio:R=22.2% G=74.5% B=3.3% Peak WL:Lp=659.3nm FWHM=134.9nm
 Render Index:Ra=90.4 AvgR=87.6
 R1=91 R2=96 R3=97 R4=89 R5=91 R6=93 R7=89
 R8=79 R9=55 R10=89 R11=89 R12=79 R13=92 R14=99 R15=88

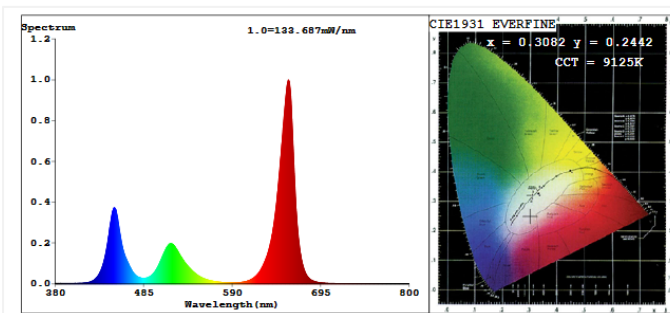
Photo Parameters:

Flux = 2242 lm Eff. : 123.31 lm/W Fe = 7.466 W
 Scotopic:3461.6 S/P:1.5443
 Photosynthetic:PPF:34.977umol/s PAR WATT:7292.1mW(400-700nm)

Electrical parameters:

V = 231.06 V I = 0.08436 A P = 18.18 W PF = 0.9326
 LEVEL:OUT WHITE:OUT

RX-PT5-900-D90-F3 18W LED tube PPF TEST



Color Parameters:

Chromaticity Coordinate: x=0.3082 y=0.2442/u'=0.2320 v'=0.4136
 CCT=9125K (Duv=-0.0451) Dominant WL:Ld=-564.7nm Purity=34.5%
 Ratio:R=31.5% G=61.9% B=6.7% Peak WL:Lp=656.7nm FWHM=19.1nm
 Render Index:Ra=12.5 AvgR=11.9
 R1=0 R2=34 R3=28 R4=0 R5=0 R6=38 R7=0
 R8=0 R9=0 R10=0 R11=0 R12=23 R13=0 R14=55 R15=0

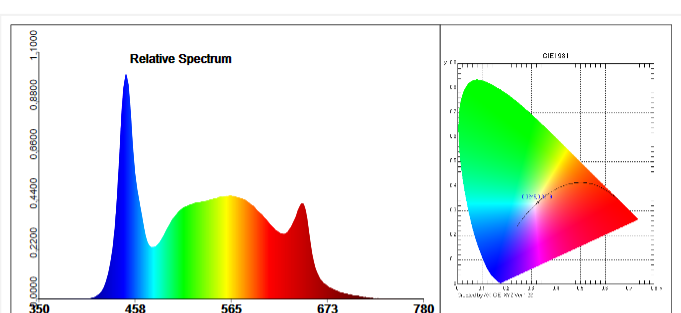
Photo Parameters:

Flux = 728.7 lm Eff. : 44.51 lm/W Fe = 5.217 W
 Scotopic:2311.5 S/P:3.1722
 Photosynthetic:PPF:25.417umol/s PAR WATT:5205.9mW(400-700nm)

Electrical parameters:

V = 231.28 V I = 0.07674 A P = 16.37 W PF = 0.9224
 LEVEL:OUT WHITE:OUT

RX-PT5-900-D90-G1 16W LED tube PPF TEST

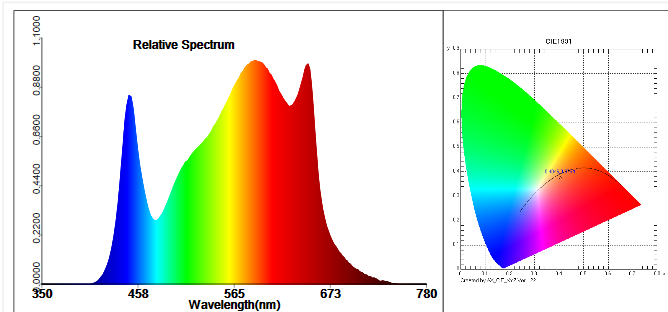


Test parameter:

E= 13750.4 lx E(fc)=1277.92 fc
 CIE x= 0.3245 CIE y= 0.3319 CIE u'=0.2049 CIE v'=0.4716
 Tc=5880 K Lp=452.0 nm HW=21.5 nm Ld=489.6 nm
 Pur=3.1 % Ratio_R=15.0 % Ratio_G=79.5 % Ratio_B=5.5 %
 Duv=-0.00110
 Ra=88.7 R1= 88 R2= 92 R3= 92
 R4= 89 R5= 88 R6= 86 R7= 92
 R8= 83 R9= 52 R10= 79 R11= 88
 R12= 62 R13= 90 R14= 96 R15= 88
 SDCM= 7.9(5300K/ENM)
 White Class:C78.377_5700K
 E1=45.617 W/m2 E2=45.87 W/m2 PPFd=208.19 umol/(m.s)
 Ech-A=6.2103 W/m2 Ech-B=11.451 W/m2 Ef=0.25384 W/m2
 Eb=14.118 W/m2 Ey=19.524 W/m2 Er=12.009 W/m2
 Ep=38.582 W/m2 Erb_Ratio=0.85061
 PPFd=1.5227E+000 umol/(m2.s)

RX-PT5-900-D90-6K7R1 17W LED tube PPFD TEST

● Testing report

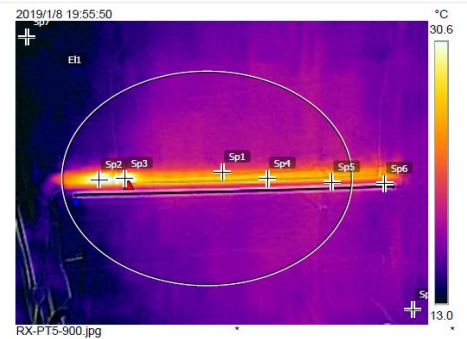


Test parameter:

E= 8512.2 lx E(fc)=791.101 fc
 CIE x= 0.4046 CIE y= 0.3754 CIE u'=0.2417 CIE v'=0.5046
 Tc=3384 K Lp=599.0 nm HW=161.6 nm Ld=584.6 nm
 Pur=34.1 % Ratio_R=21.7 % Ratio_G=74.8 % Ratio_B=3.5 %
 Duv=-0.00669
 Ra=89.1 R1= 89 R2= 95 R3= 96
 R4= 87 R5= 89 R6= 92 R7= 88
 R8= 76 R9= 48 R10= 88 R11= 86
 R12= 77 R13= 91 R14= 99 R15= 87
 SDCM= 6.9(3500K/White)
 White Class:OUT
 E1=27.558 W/m2 E2=28.015 W/m2 PPFD=131.89 μmol/(m·s)
 Ech-A=4.7991 W/m2 Ech-B=5.257 W/m2 Ef=0.45744 W/m2
 Eb=5.1071 W/m2 Ey=11.311 W/m2 Er=11.162 W/m2
 Ep=24.336 Wphyto/m2 Erb_Ratio=2.1855
 PPFDf=2.7605E+000 μmol/(m2·s)

RX-PT5-900-D90-F3 20W LED tube PPFD TEST

Measurements	
E11	Max 36.3 °C
	Min 13.1 °C
	Average 14.5 °C
Sp1	18.1 °C
Sp2	35.6 °C
Sp3	34.5 °C
Sp4	22.3 °C
Sp5	15.4 °C
Sp6	14.4 °C
Sp7	13.0 °C
Sp8	13.6 °C
Parameters	
Emissivity	0.95
Refl. temp.	20 °C



Surface temperature Test

● Packing List Package includes the following items



RX- PT5-900 Led Plant Grow Light Tube



Plastic Wire Cable 2pcs
 PT5 Light Fixture Mounting Clip 2pcs

Electrical installation instructions

1. When open the package, please check whether the inside is including product, accessory, label, certificate quality. And please as that that light is perfect without any damage.
2. The wires of LED Light is two-core, brown wire is live line, blue wire is null line.
3. LED Light will work when the voltage up to rated voltage, so please be sure the voltage within the requested range, or it will damage the light which can't be repaired.
4. when the electrical continuity is connected, the lead wire should be in electric insulating The way of connect wire.

Attention

1. Led grow light housing insulation, if damaged, it is forbidden to use.
2. When connecting the wires please turn off the power, and check whether the wires are connected correctly. Never connect the wires in opposite way, or the power should not be turned on.
3. Please keep the trip bolt being fastening and reliable, in case of the light fall down of looseness.
4. When finishing connect the wires, please use the insulation gummed tape to convolve the wires, confirm the insulation and solve the waterproof problem.

Led Plant Grow Light Tube LED Growing Lights Tent Lamps for Plants Vegetable Flower seeding Hydroponic System Greenhouse