

# LED Smart Grow



## Smart Grow

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### Product Enlightenment

LED Smart Grow

SG Series Grow Light is designed with proper spectrum to enhance growth of the plants from seedling to flowering. With programmable control the spectrum and intensity level can be adjusted and programed to achive enhanced growth cycle.

### Product Attribute

**Initial Delivered Lumens:** 2950, 7050

**Input Power:** 120W, 214W

**Input Voltage:** 120-277 VAC

**Power Factor:** > 0.9

**Controls:** Smart controller remote

**Patented Design**

**Protections:** Short circuit/Over current/Over Temperature/Surge protection

**Driver:** High efficient internal

**Operating Temperature Range:** 50°C 122°F)

WARNING: Exceeding maximum operating temperature may result in thermal shutdown

### Luminaire Performance

TYPE	WATTS	LUMENS	EFFICIENCY	BEAM ANGLE
SG150	120	2900	24LPW	130°
SG300	214	7050	33LPW	130°

### Lumen Maintenance

AMBIENT TEMP IN °C	AMBIENT TEMP IN °F	SG150 HOURS L90	SG300 HOURS L90
25	77	55000	71000
AMBIENT TEMP IN °C	AMBIENT TEMP IN °F	SG150 HOURS L70	SG300 HOURS L70
25	77	195000	228000

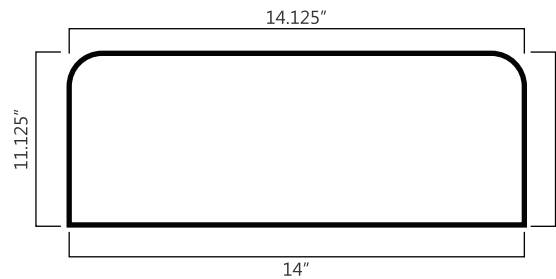
#### OPTICAL SYSTEM

- High efficient LED chip
- LED designed for uniform and suitable wave length



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## SG 150X

## SG300X

Efficiency	1.17 $\mu$ mol/J	1.18 $\mu$ mol/J
Power	120W	214W
PPF	140.7	251.8
Max Current	1.01 A @120V 0.507A @277	1.78A @120V 0.81A @ 277V
Frequency	50-60Hz	50-60Hz
Power Factor	>0.95	>0.95
Lumen	2900 lm	7050 lm
LPW	24	33
LED Life rating	50000 Hrs+	50000 Hrs+
Thermal Management	Active	Active
Spectrum Control	Programmable Remote Control	

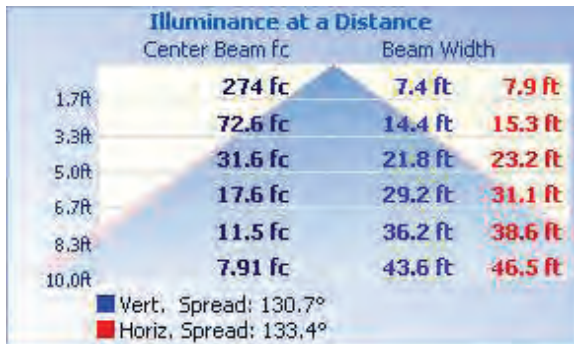
# LED Smart Grow

## SG150X-LED Smart Grow 150

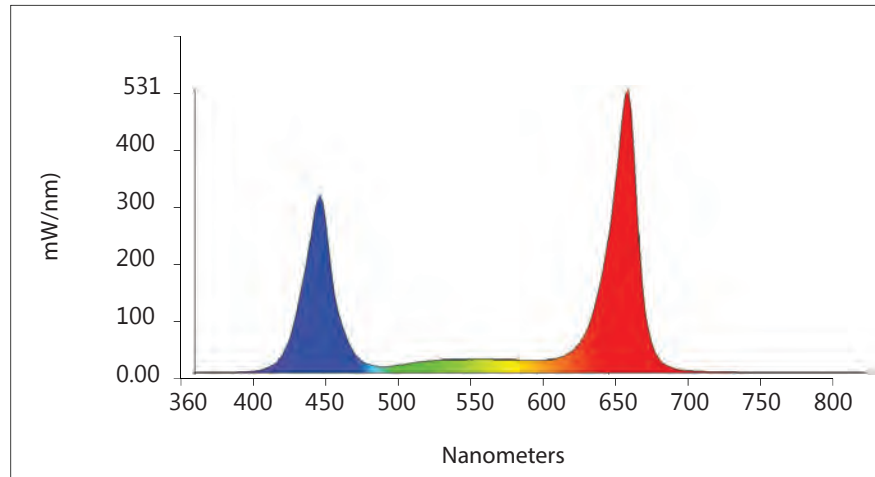
Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
0	791	791	791	791	791
5	802	796	788	784	791
10	800	790	786	780	791
15	793	782	779	773	786
20	779	769	769	760	770
25	761	753	755	747	752
30	741	732	735	734	734
35	718	703	708	708	710
40	682	670	672	676	674
45	630	629	638	641	638
50	575	565	596	601	605
55	527	519	538	557	556
60	474	467	469	501	497
65	411	405	407	432	432
70	345	315	339	339	352
75	230	226	237	248	256
80	147	128	135	138	146
85	44	29	37	43	46
90	0	0	0	0	0

### Illuminance - Cone of Light

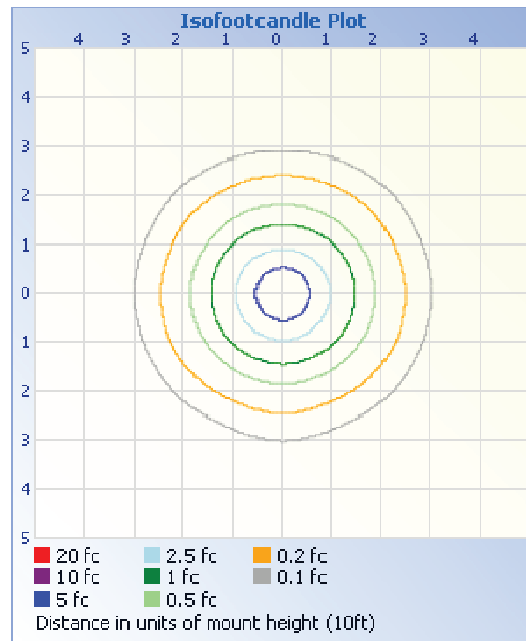


Spectral Data Over Visible Wavelengths



Isoillumination Plot

Mounting Height: 10 ft.



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	643.5	23.3
0-40	1086	39.2
0-60	2052	74.2
60-90	714.6	25.8
0-90	2767	100.0
90-180	0.0	0.0
0-180	2767	100.0

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	75.4	2.7
10-20	220.6	8.0
20-30	347.5	12.6
30-40	442.1	16.0
40-50	486.2	17.6
50-60	480.1	17.4
60-70	408.6	14.8
70-80	251.8	9.1
80-90	54.2	2.0

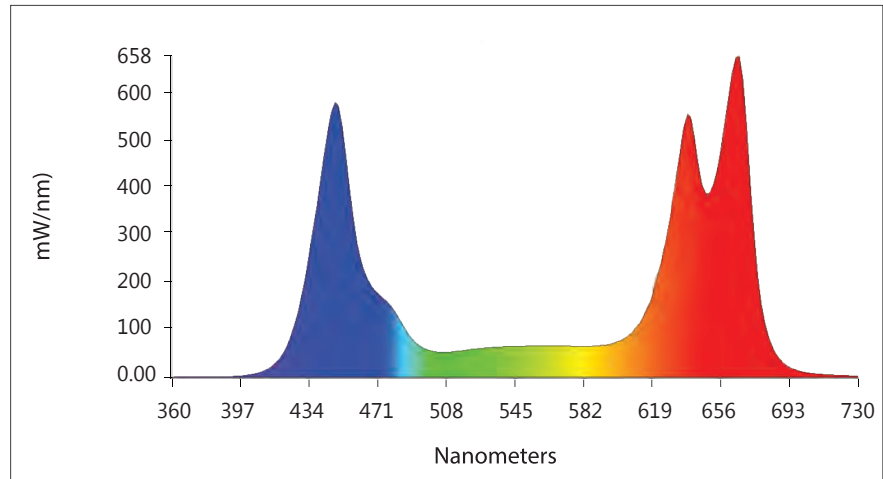
# LED Smart Grow

## SG300X-LED Smart Grow 300

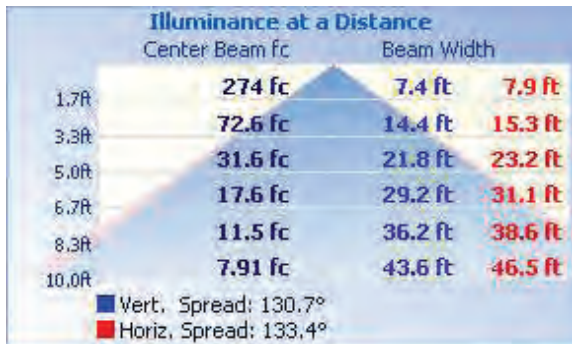
Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
0	1875	1875	1875	1875	1875
5	1889	1883	1872	1868	1879
10	1882	1876	1864	1856	1871
15	1866	1855	1850	1839	1859
20	1844	1829	1828	1814	1832
25	1811	1793	1798	1778	1791
30	1765	1749	1761	1748	1743
35	1714	1696	1700	1692	1691
40	1645	1627	1622	1620	1616
45	1487	1495	1535	1539	1527
50	1396	1376	1446	1445	1440
55	1289	1270	1274	1337	1339
60	1164	1143	1140	1206	1197
65	1015	994	994	1036	1023
70	823	797	816	800	841
75	557	555	586	582	590
80	329	312	334	337	340
85	88	76	86	98	106
90	2	2	2	2	2

Spectral Data Over Visible Wavelengths

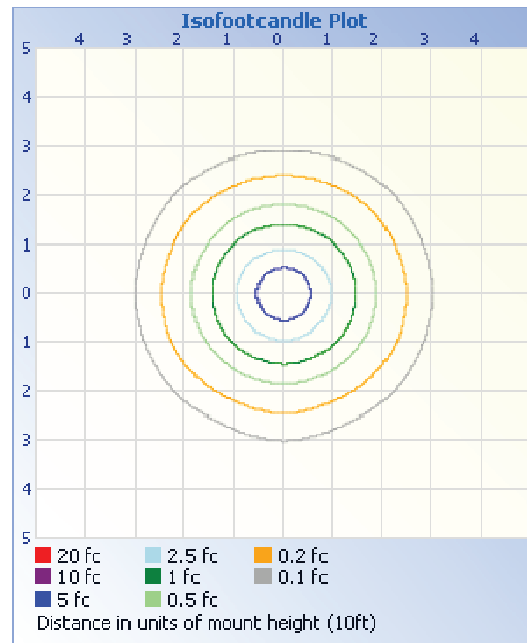


### Illuminance - Cone of Light



Isoillumination Plot

Mounting Height: 10 ft.



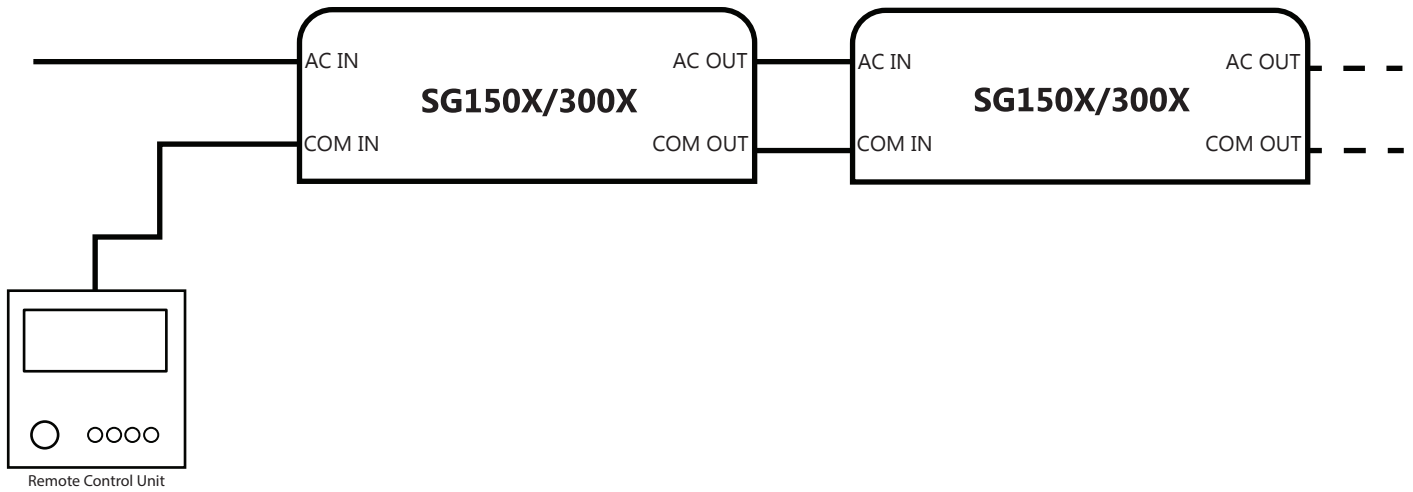
### Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	1527	23.1
0-40	2585	39.1
0-60	4905	74.3
60-90	1699	25.7
0-90	6604	100.0
90-180	0.2	0.0
0-180	6604	100.0

### Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	178.7	2.7
10-20	522.8	7.9
20-30	825.6	12.5
30-40	1058	16.0
40-50	1168	17.7
50-60	1152	17.4
60-70	980.1	14.8
70-80	593.9	9.0
80-90	125.3	1.9
90-100	0.2	0.0

## Daisy-chain System Connection Diagram



**One controller connected with a grow light can control as much as 250 grow lights in a daisy-chain system configuration as shown above. See the table below for maximum lamps in a daisy-chain**

**Daisy-Chain Configuration  
Per Circuit Maximum Lamps**

Connection Type	SG 150X	SG 300X
<b>COM IN/COM OUT Serial Connection</b>	250 Lamps Max	250 Lamps Max
<b>AC IN/AC OUT Serial Connection</b>	10 Lamps Max	5 Lamps Max

# LED Smart Grow

## Installation

PLEASE READ ENTIRE DOCUMENT BEFORE INSTALLATION

WARNING: Improper installation could result in product damage and void all warranties.

WARNING: Disconnect all power before servicing.

Risk of electrical shock or fire.

1) WARNING – RISK OF FIRE OR ELECTRIC SHOCK. INSTALLATION OF THIS RETROFIT KIT REQUIRES A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE LUMINAIRE'S ELECTRICAL SYSTEM AND THE HAZARD INVOLVED. IF NOT QUALIFIED, DO NOT ATTEMPT INSTALLATION. CONTACT A QUALIFIED ELECTRICIAN.

AVERTISSEMENT – RISQUE D'INCENDIE OU DE CHOC ÉLECTRIQUE. L'INSTALLATION DE CE NÉCESSAIRE DE MODERNISATION EXIGE UNE PERSONNE FAMILIÈRE AVEC LA CONSTRUCTION ET LE FONCTIONNEMENT DU SYSTÈME ÉLECTRIQUE DU LUMINAIRE ET DES RISQUES ASSOCIÉS. TOUTE PERSONNE QUI N'EST PAS QUALIFIÉE NE DOIT FAIRE AUCUNE TENTATIVE D'INSTALLATION ET DOIT CONTACTER UN ÉLECTRICIEN QUALIFIÉ.

2) WARNING – Risk of fire or electric shock. Install this kit only in luminaires that have the construction features and dimensions shown in the photographs and/or drawings and where the input rating of the retrofit kit does not exceed the input rating of the luminaire.

AVERTISSEMENT - Risque d'incendie ou de choc électrique. Installez ce kit uniquement dans des luminaires qui ont les caractéristiques et les dimensions de la construction indiquées dans les photographies et / ou les dessins et où la note d'entrée du kit de rééquipement ne dépasse pas la note d'entrée du luminaire

3) WARNING – RISK OF FIRE OR ELECTRIC SHOCK. DO NOT ALTER, RELOCATE, OR REMOVE WIRING, LAMP HOLDERS, POWER SUPPLY, OR ANY OTHER ELECTRICAL COMPONENT.

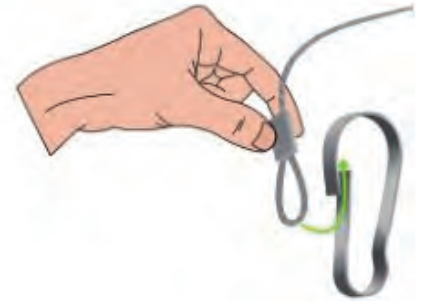
AVERTISSEMENT – RISQUE D'INCENDIE OU DE CHOC ÉLECTRIQUE. NE PAS MODIFIER, DÉPLACER OU D'ENLEVER LE CÂBLAGE, LES DOUILLES, L'ALIMENTATION, OU TOUT AUTRE COMPOSANT ÉLECTRIQUE

4) WARNING – ONLY THOSE OPEN HOLES INDICATED IN THE PHOTOGRAPHS AND/OR DRAWINGS MAY BE MADE OR ALTERED AS A RESULT OF KIT INSTALLATION. DO NOT LEAVE ANY OTHER OPEN HOLES IN AN ENCLOSURE OF WIRING OR ELECTRICAL COMPONENTS.

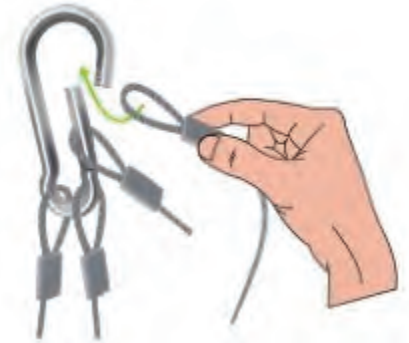
SEULS LES OUVERTURES INDIQUÉES DANS LES PHOTOS ET/OU LES DESSINS PEUVENT ÊTRE FAITS OU MODIFIÉS À LA SUITE DE L'INSTALLATION DU NÉCESSAIRE. IL EST INTERDIT DE LAISSER D'AUTRES OUVERTURES DANS UN BOÎTIER DE CÂBLAGE OU DE COMPOSANTS ÉLECTRIQUES.

5) WARNING – TO PREVENT WIRING DAMAGE OR ABRASION, DO NOT EXPOSE WIRING TO EDGES OF SHEET METAL OR OTHER SHARP OBJECTS.

AVERTISSEMENT – AFIN DE PRÉVENIR L'ENDOMMAGEMENT OU L'ABRASION DES CÂBLES, ÉVITER TOUT CONTACT ENTRE CES DERNIERS ET LE BORD D'UN OBJET



- 1 Take one loop-end of each hanging cable and attach to a snap-hook (included).



- 2 Fasten the other loop-end of the cable to the hanging snap hook.



- 3 Clasp each snap hook to each sling swivel screw on the LED panel.

\*Minimum distance between the luminaire should be 10 inches.  
\*Minimum distance from the ceiling and the side walls should be 2 feet.

- 4 Hang the LED fixture to a firm ceiling.

- 5 Plug the power cord to a well grounded AC outlet.