Ultra High Light Output
QLUXR22330W100LED Series

Information Overview	
Wattage	50W
Available CRI	80+/90+*
Available CCT	2700-5000K
Dimensions	228mm (OD)
Number of LEDs	100
Beam Angle	120

RoHS

CE

5 Year Warranty

FEATURES

- High Color Renedering Index (CRI) Ra max. 98
- High efficacy lumen output
- LM-80 compliant LEDs
- Tight Binning 3 Step Mac Adam Ellipses
- Uniform & Crisp Light Source Intensity
- Hot Spot Free Design
- Exceed ENERGY STAR lumen maintenance requirements
- Extra thin low profile
- Low heat generation, easy thermal management
- Easy to fit in new design or retrofit applications

APPLICATIONS

For Architectural New Designs and Retrofits lighting fixtures:

Indoor Lightings:
- Recessed can light
- Ceiling light
- Wall sconces
- Table lamps
- Fixtures
- Signage

Outdoor Lightings:
- Street light
- Marker lights
- Wall sconces
- Signage lights

ELECTRICAL SPECS.

50W Round	Wattage	Forward Voltage			Forward Current	
Model Number	Max.	Typ.	Vf Min.	Vf Max.	Typ.	Max.
QLUXR22330W100LED	50W	30V	28V	33V	1000mA	1500mA

Order Number	CRI	CCT
QLUXR22330W100LED22K8CR	80+	2200K
QLUXR22330W100LED25K8CR	80+	2500K
QLUXR22330W100LED27K8CR	80+	2700K
QLUXR22330W100LED30K8CR	80+	3000K
QLUXR22330W100LED32K8CR	80+	3200K
QLUXR22330W100LED35K8CR	80+	3500K
QLUXR22330W100LED40K8CR	80+	4000K
QLUXR22330W100LED50K8CR	80+	5000K

Order Number	CRI	CCT
QLUXR22330W100LED22K9CR	90+	2200K
QLUXR22330W100LED25K9CR	90+	2500K
QLUXR22330W100LED27K9CR	90+	2700K
QLUXR22330W100LED30K9CR	90+	3000K
QLUXR22330W100LED32K9CR	90+	3200K
QLUXR22330W100LED35K9CR	90+	3500K
QLUXR22330W100LED40K9CR	90+	4000K
QLUXR22330W100LED50K9CR	90+	5000K

* Up to 98 CRI

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Electrical Specifications - 80 CRI

Absolute Maximum Ratings (Ta=25C, RH30%)			
Parameter	**Symbol**	**Rating**	**Unit**
DC Input Forward Current *	I_{IN}	1500	mA
Power Dissipation	P_D	50	W
Junction Temperature*	Tj	125	°C
Operating Temperature	Topr	-20 ~ +50	°C
ESD	HBM	5000	V
Storage Temperature	Tstg	-40 ~ +80	°C
Temperature of Al MCPCB Max.**	TS	85	°C

Electrical & Optical Characteristics (Ta=25C, RH30%)							
Parameter	**Symbol**	**Condition**	**Model**	**Min.**	**Typ.**	**Max.**	**Unit**
Forward Voltage*	VF	I_F= 1000 mA	---	28	30	33	V
Total Flux	ΦV	I_F= 1000 mA	2700K	---	3750	---	lm
			3000K	---	3900	---	
			3500K	---	4050	---	
			4000K	---	4200	---	
			5000K	---	4500	---	
Efficacy	η	I_F= 1000 mA	2700K	---	125	---	lm/W
			3000K	---	130	---	
			3500K	---	135	---	
			4000K	---	140	---	
			5000K	---	150	---	
Color Temperature	CCT	I_F= 1000 mA	2700K	---	2700	---	K
			3000K	---	3000	---	
			3500K	---	3500	---	
			4000K	---	4000	---	
			5000K	---	5000	---	
Color Rendering Index**	CRI	I_F= 1000 mA	---	80	---	---	---
Viewing Angle***	$2\theta_{1/2}$	I_F= 1000 mA	---	---	120	---	degree
Life Time (L_{70})	T	65C at T_S	---	---	50000	---	hours

* Notes: All measurements were made under the standardized environment of SSC.
** CCT is <90 for +4000K boards
*** 2θ1/2 is the off-axis where the luminous intensity is 1/2 of the peak intensity.
**** Thermal resistance: RthJS (junction / solder)
Tolerance: VF :±0.1V, IV :±7%, Ra :±2, x,y :±0.007

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Electrical Specifications - 90 CRI

Absolute Maximum Ratings (Ta=25C, RH30%)			
Parameter	**Symbol**	**Rating**	**Unit**
DC Input Forward Current *	I_{IN}	1500	mA
Power Dissipation	P_D	50	W
Junction Temperature*	Tj	125	°C
Operating Temperature	Topr	-20 ~ +50	°C
ESD	HBM	5000	V
Storage Temperature	Tstg	-40 ~ +80	°C
Temperature of Al MCPCB Max.**	TS	85	°C

Electrical & Optical Characteristics (Ta=25C, RH30%)							
Parameter	**Symbol**	**Condition**	**Model**	**Min.**	**Typ.**	**Max.**	**Unit**
Forward Voltage*	VF	I_F= 1000 mA	---	28	30	33	V
Total Flux	ΦV	I_F= 1000 mA	2700K	---	3300	---	lm
			3000K	---	3600	---	
			3500K	---	3750	---	
			4000K	---	3900	---	
			5000K	---	4350	---	
Efficacy	η	I_F= 1000 mA	2700K	---	110	---	lm/W
			3000K	---	120	---	
			3500K	---	125	---	
			4000K	---	130	---	
			5000K	---	145	---	
Color Temperature	CCT	I_F= 1000 mA	2700K	---	2700	---	K
			3000K	---	3000	---	
			3500K	---	3500	---	
			4000K	---	4000	---	
			5000K	---	5000	---	
Color Rendering Index**	CRI	I_F= 1000 mA	---	90	---	98	---
Viewing Angle***	$2\theta_{1/2}$	I_F= 1000 mA	---	---	120	---	degree
Life Time (L_{70})	T	65C at T_S	---	---	50000	---	hours

* Notes: All measurements were made under the standardized environment of SSC.
** CCT is <90 for +4000K boards
*** 2θ1/2 is the off-axis where the luminous intensity is 1/2 of the peak intensity.
**** Thermal resistance: RthJS (junction / solder)
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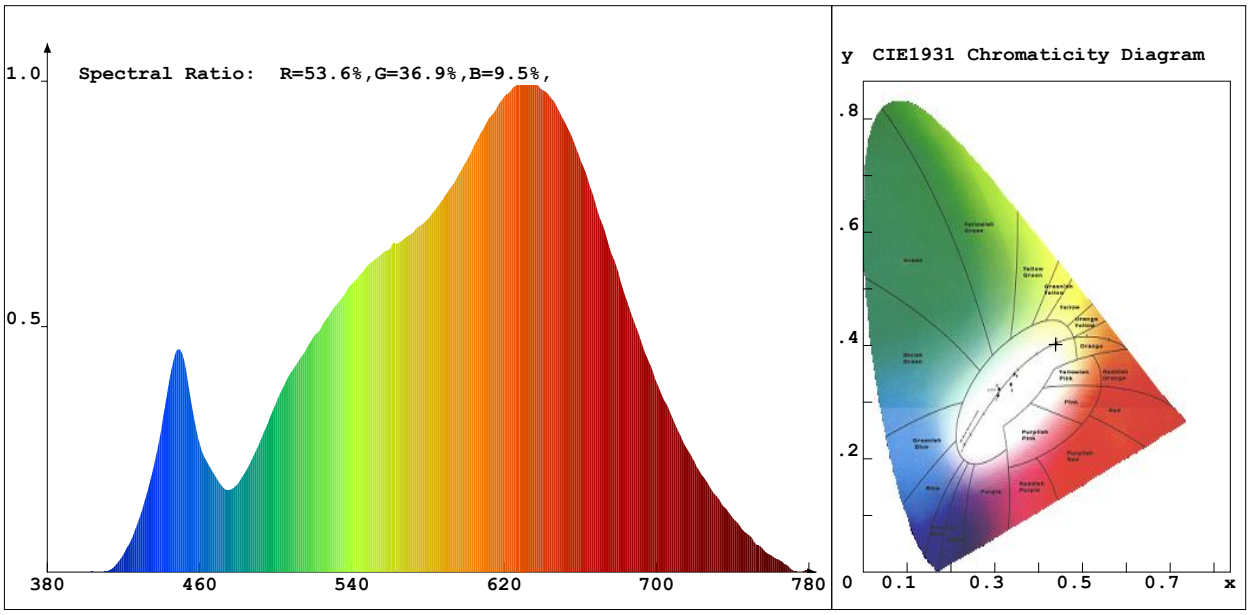
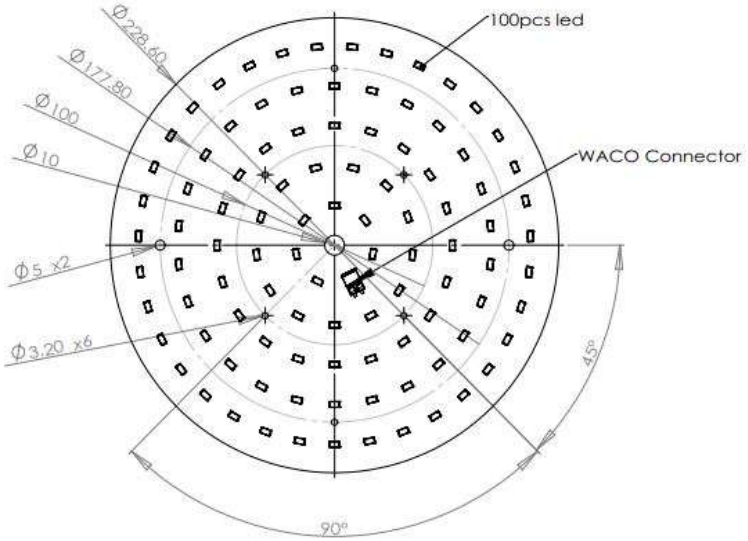


Recommended LED Drivers			
120V	**277V**	**200-240V**	**Universal**
DA35W1000C	DE35W1000C	DU35W1000C	DS35W1000C

Mechanical Specs.



CAUTION!

- **Turn the power off before installing LED to the proper constant current LED driver.**
- **Avoid short circuit, or drilling / cutting the LED board! It will damage its electrical circuit!**

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Precaution for use:

(1) Storage
To avoid the moisture penetration, we recommend store in a dry box
with a desiccant . The recommended storage temperature range is 5C to 30C and a maximum
humidity of RH50%.
(2) Use Precaution after Opening the Packaging as separation of the lens may affect the light output efficiency.
Pay attention to the following:
a. Recommend conditions after opening the package
- Sealing
- Temperature : 5 ~ 40°C Humidity : less than RH30%
b. If the package has been opened more than 4 week(MSL_2a) or the color of the
desiccant changes, components should be dried for 10-12hr at 60±5°C
(3) Do not apply mechanical force or excess vibration during the cooling process to normal
temperature after soldering.
(4) Do not rapidly cool device after soldering.
(5) Components should not be mounted on warped (non coplanar) portion of PCB.
(6) Radioactive exposure is not considered for the products listed here in.
(7) Gallium arsenide is used in some of the products listed in this publication. These products are dangerous if they are burned or shredded in the process of disposal. It is also dangerous to
drink the liquid or inhale the gas generated by such products when chemically disposed of.
(8) This device should not be used in any type of fluid such as water, oil, organic solvent and etc. When washing is required, IPA (Isopropyl Alcohol) should be used.
(9) When the LEDs are in operation the maximum current should be decided after measuring the package temperature.
(10) LEDs must be stored properly to maintain the device. If the LEDs are stored for 3 months or more after being shipped from SSC, a sealed container with a nitrogen atmosphere should be used for storage.
(11) The appearance and specifications of the product may be modified for improvement without notice.
(12) Long time exposure of sunlight or occasional UV exposure will cause lens discoloration.
(13) VOCs (Volatile organic compounds) emitted from materials used in the construction of fixtures can penetrate silicone encapsulants of LEDs and discolor when exposed to heat and photonic energy. The result can be a significant loss of light output from the fixture.
Knowledge of the properties of the materials selected to be used in the construction of fixtures can help prevent these issues.
(14)Attaching LEDs, do not use adhesives that outgas organic vapor.
(15)The driving circuit must be designed to allow forward voltage only when it is ON or OFF.
If the reverse voltage is applied to LED, migration can be generated resulting in LED damage.

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