Technical Application Guide

Durable Brightness

High lumen LED Bulb in indoor application, even designed for a wide range of applications including damp areas.

The housing is made of plastic and metal and not so fragile as glass bulbs, which makes it even more popular in most applications.

Under 220~240V, the product can deliver the best performance. And even under 90V, the bulb can be lit up, which makes it work in some unstable line voltage.

LEDbulb offers up to 89% energy saving when replacing GLS and 50% when replacing a CFLi. It also has a longer lifetime of 10,000 hours (equivalent to 10 years if lit 2.7 hours per day across 365 days) conditions.

Up to 89% Energy cost saving

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Design highlights

- Form factor is designed as a direct retrofit into high lumen LED bulbs at A67, A80, A110 and A130 shape
- Long lifetime of 10,000 hours (F50L70)
- Up to 89% energy savings when replacing a GLS (50% when replacing a CFLi)
- Designed for a wide range of applications including damp areas
- Lit up under 90V line voltage. And best performance is delivered under 220V~240V
- Rugged plastic design

Application areas

The high quality light makes it ideal for general lighting applications in the logic center, factory, car parking, convenience store, public space and even damp areas by offering the energy-saving solution:

- Logic center
- Factory
- Car parking
- Convenience store
- Public space
- Garden lighting
- Wet market

Application notes

- Operating temperature range is between -20 °C and 45 °C ambient
- Only to apply in dry or damp locations and most of open fixtures with E27/B22/E40 lamp-holders that offer sufficient space (10 mm free air space)
- Not intended for use with emergency light fixtures or exit lights
- Not intended for enclosed luminaires
- Can be used in damp area
- Lit up line voltage: 90V

Product features

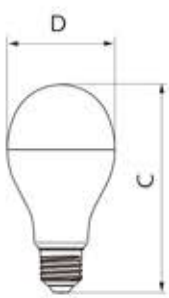
Technical Specifications

Product type	Voltage (V)	Wattage (W)	Cap	Bulb shape	CCT (K)	Lumen (Lm)	Luminous efficacy (=lm/W)	Lifetime (hours)	CRI	Power factor	Dimmable
LEDBulb 14.5-120W E27 3000K 230V A67	220-240	14.5	E27	A67	3000	1700	117	10000	70	>0.5	No
LEDBulb 14.5-120W B22 3000K 230V A67	220-240	14.5	B22	A67	3000	1700	117	10000	70	>0.5	No
LEDBulb 14.5-120W E27 6500K 230V A67	220-240	14.5	E27	A67	6500	1800	124	10000	70	>0.5	No
LEDBulb 14.5-120W B22 6500K 230V A67	220-240	14.5	B22	A67	6500	1800	124	10000	70	>0.5	No
LEDBulb 19-160W E27 6500K 230V A80	220-240	19	E27	A80	6500	2300	121	10000	70	>0.5	No
LEDBulb 19-160W B22 6500K 230V A80	220-240	19	B22	A80	6500	2300	121	10000	70	>0.5	No
LEDBulb 27-200W E27 6500K 230V A110	220-240	27	E27	A110	6500	3000	111	10000	70	>0.5	No
LEDBulb 33-200W E27 6500K 230V A110	220-240	33	E27	A110	6500	4000	120	10000	70	>0.5	No
LEDBulb 40W E27 6500K 230V A130	220-240	40	E27	A130	6500	5000	120	10000	70	>0.5	No
LEDBulb 40W E40 6500K 230V A130	220-240	40	E40	A130	6500	5000	120	10000	70	>0.5	No

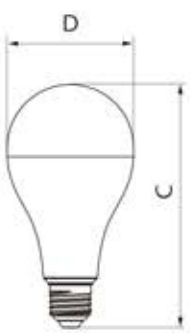
Dimensions

Type	C typical Overall Length (mm)	D typical Diameter (mm)	Weight (gram)
LEDBulb 14.5-120W E27 3000K 230V A67	132	67	125
LEDBulb 14.5-120W B22 3000K 230V A67	132	67	125
LEDBulb 14.5-120W E27 6500K 230V A67	132	67	125
LEDBulb 14.5-120W B22 6500K 230V A67	132	67	125
LEDBulb 19-160W E27 6500K 230V A80	154	80	157
LEDBulb 19-160W B22 6500K 230V A80	154	80	157
LEDBulb 27-200W E27 6500K 230V A110	194	110	219
LEDBulb 33W E27 6500K 230V A110	194	110	230
LEDBulb 40W E27 6500K 230V A130	225	130	310
LEDBulb 40W E40 6500K 230V A130	232	130	330

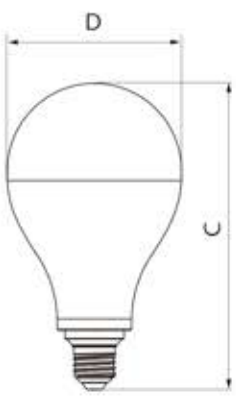
LEDbulb Dimmable



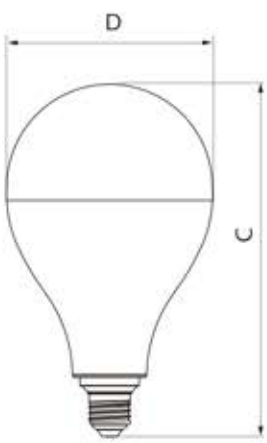
A67 E27/B22



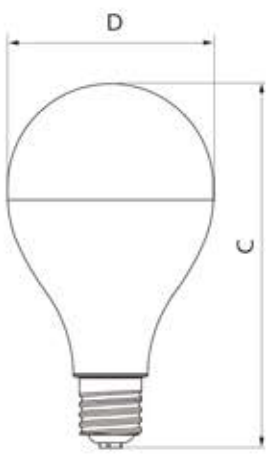
A80 E27/B22



A110 E27



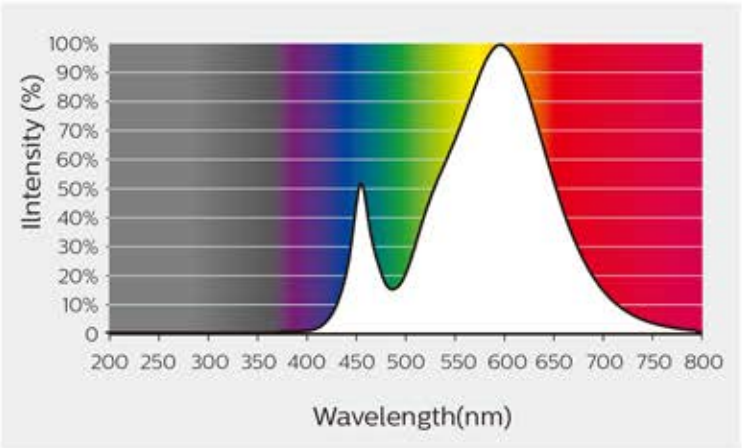
A130 E27



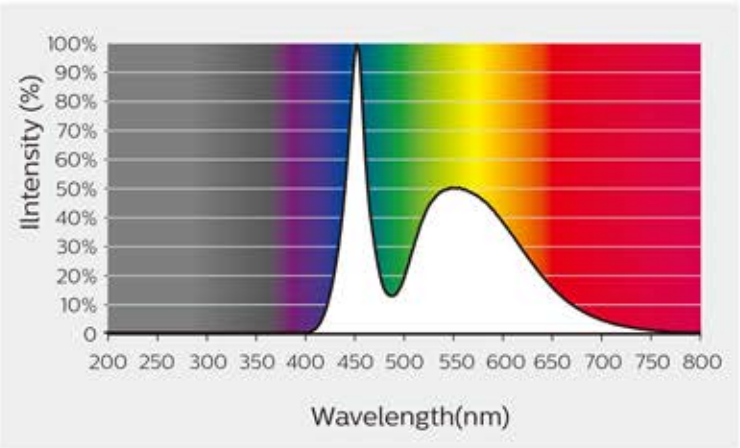
A130 E40

Spectral Power Distribution

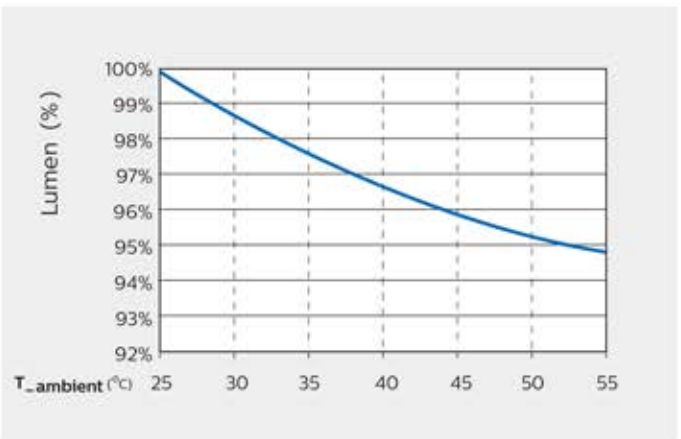
Spectrum high lumen LEDbulb 3000K

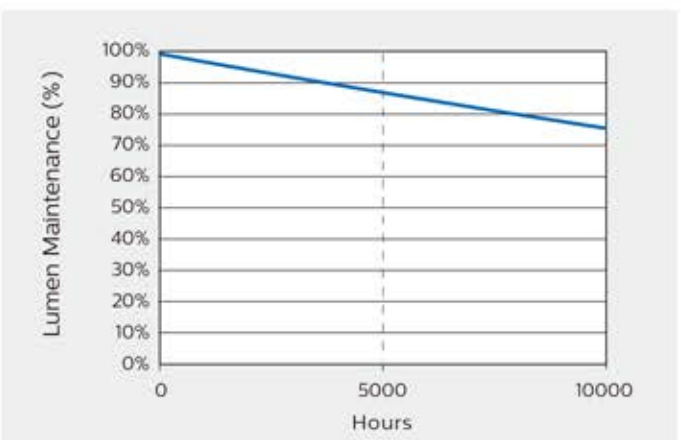


Spectrum high lumen LEDbulb 6500K



Temperature





Tc Test Point

T_c Max: 90 °C

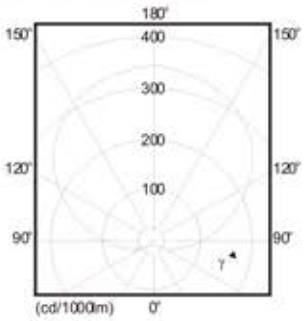
Photometric Diagrams

LEDBulb 14.5-120W E27 6500K 230V A67

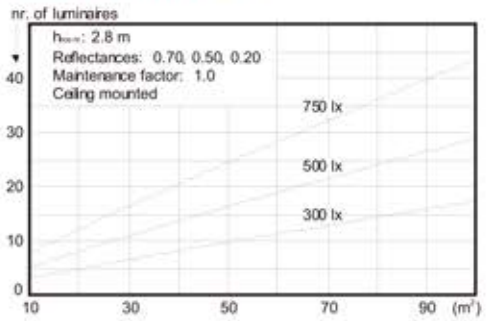
1 x 1800 lm

Light output ratio	1.58	CIE flux code	4 19 49 15 158
Service upward	1.34		
Service downward	0.24	UGRcen (4Hx8H, 0.25H)	21

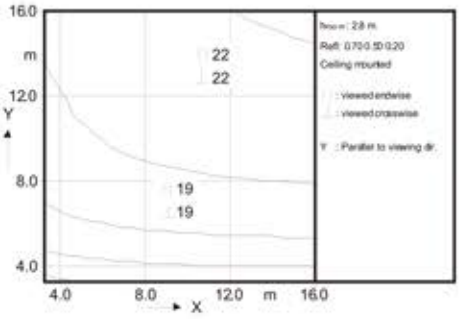
Polar intensity diagram



Quantity estimation diagram



UGR diagram

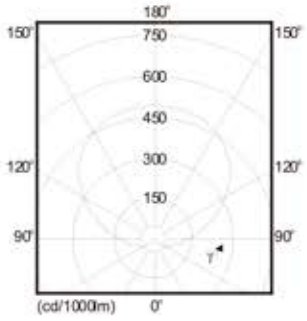


LEDBulb 19-160W E27 6500K 230V A80

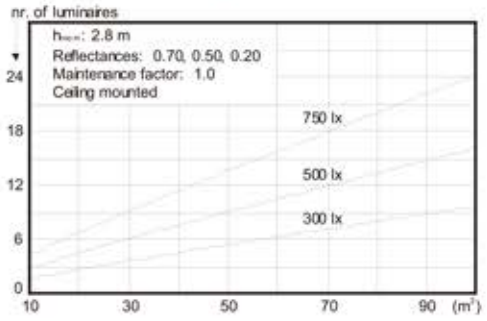
1 x 2300 lm

Light output ratio	2.22	CIE flux code	5 21 50 14 222
Service upward	1.91		
Service downward	0.31	UGRcen (4Hx8H, 0.25H)	21

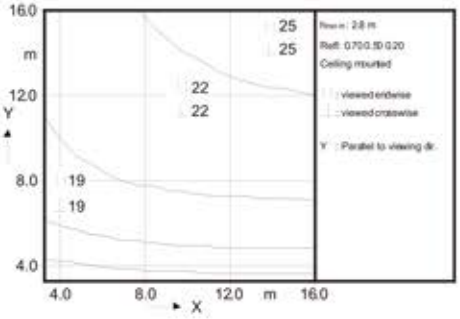
Polar intensity diagram



Quantity estimation diagram



UGR diagram

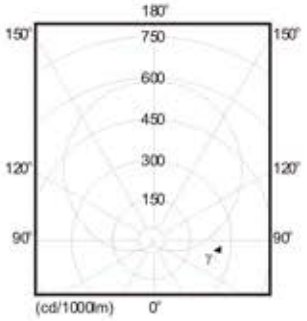


LEDBulb 27-200W E27 6500K 230V A110

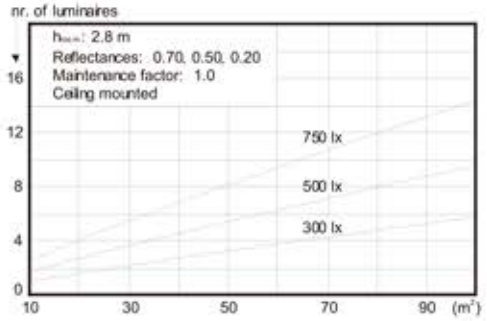
1 x 3000 lm

Light output ratio	2.86	CIE flux code	5 21 51 18 286
Service upward	2.35		
Service downward	0.51	UGRcen (4Hx8H, 0.25H)	23

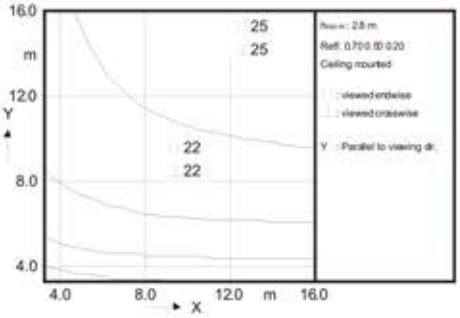
Polar intensity diagram



Quantity estimation diagram



UGR diagram

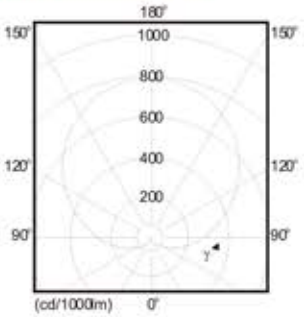


LEDBulb 33-200W E27 6500K 230V A110

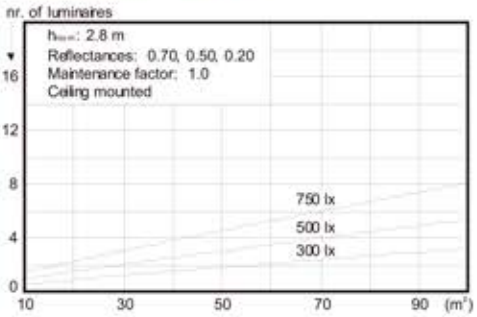
1 x 4000 lm

Light output ratio	3.82	CIE flux code	5 21 51 18 382
Service upward	3.13		
Service downward	0.69	UGRcen (4Hx8H, 0.25H)	25

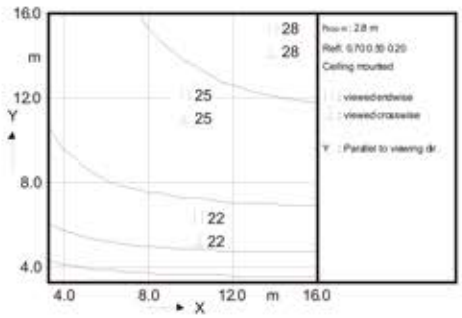
Polar intensity diagram



Quantity estimation diagram



UGR diagram

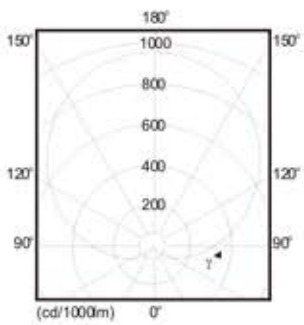


LEDBulb 40W E27 6500K 230V A130

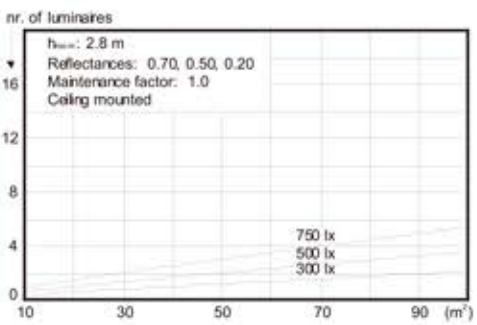
1 x 5000 lm

Light output ratio	4.57	CIE flux code	5 21 51 17 457
Service upward	3.79		
Service downward	0.78	UGRcen (4Hx8H, 0.25H)	25

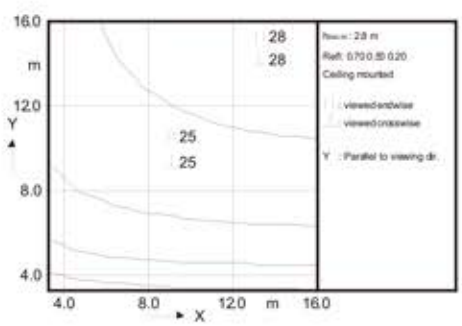
Polar intensity diagram



Quantity estimation diagram

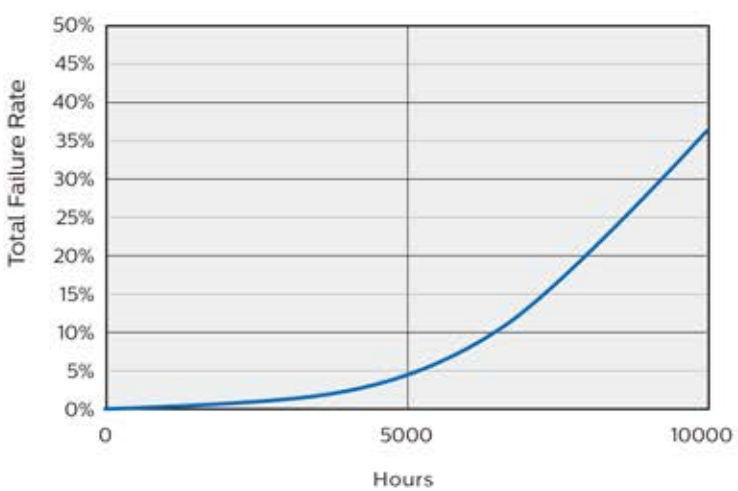


UGR diagram



Lifetime + Sustainability

Failure Rate Curve of High lumen LED bulbs 6500K



High lumen LED bulbs has a lifetime exceeding 10,000 hours defined as (F50L70), where:

- F50L70, meaning 50% in total of whole population of lamps either fail without light output or lumen maintenance lower than 70% of initial value.
- Lifetime estimation based on the application environment condition: at room temperature (25°C), free air burning, baseup burning position, and at rated voltage.

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