



lighting
—— *that creates* ——
cheerful workspaces



**BRIGHTNESS
MANAGEMENT**

LG 7 GUIDELINE

compliant products



BRIGHTNESS MANAGEMENT

theory and LG7 guidelines

for happy people and vibrant spaces

The 'Right light' has an enlightening touch on the environment. It goes beyond just illumination to create a warm, comfortable and aesthetic ambience that facilitates people to work effectively and live fully.

BRIGHTNESS MANAGEMENT is all about creating the 'Right Light'.

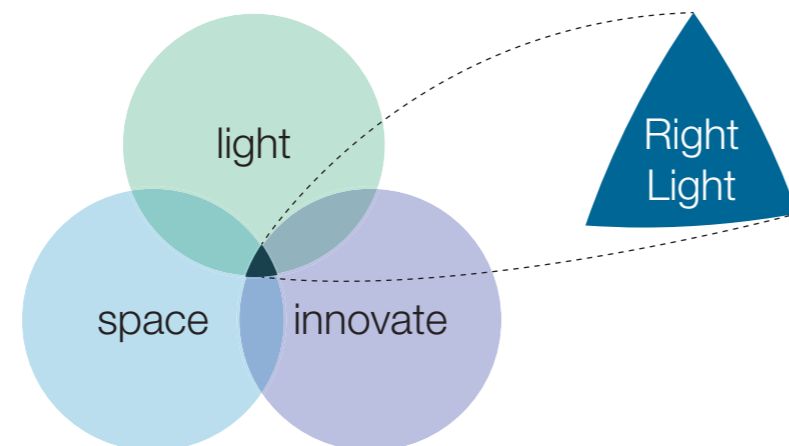


Extensive research has captured the dynamics, impact and the effects of light on human beings, their moods, feelings and working styles. Across the world, it is now believed that light is more than just lux levels and brightness.

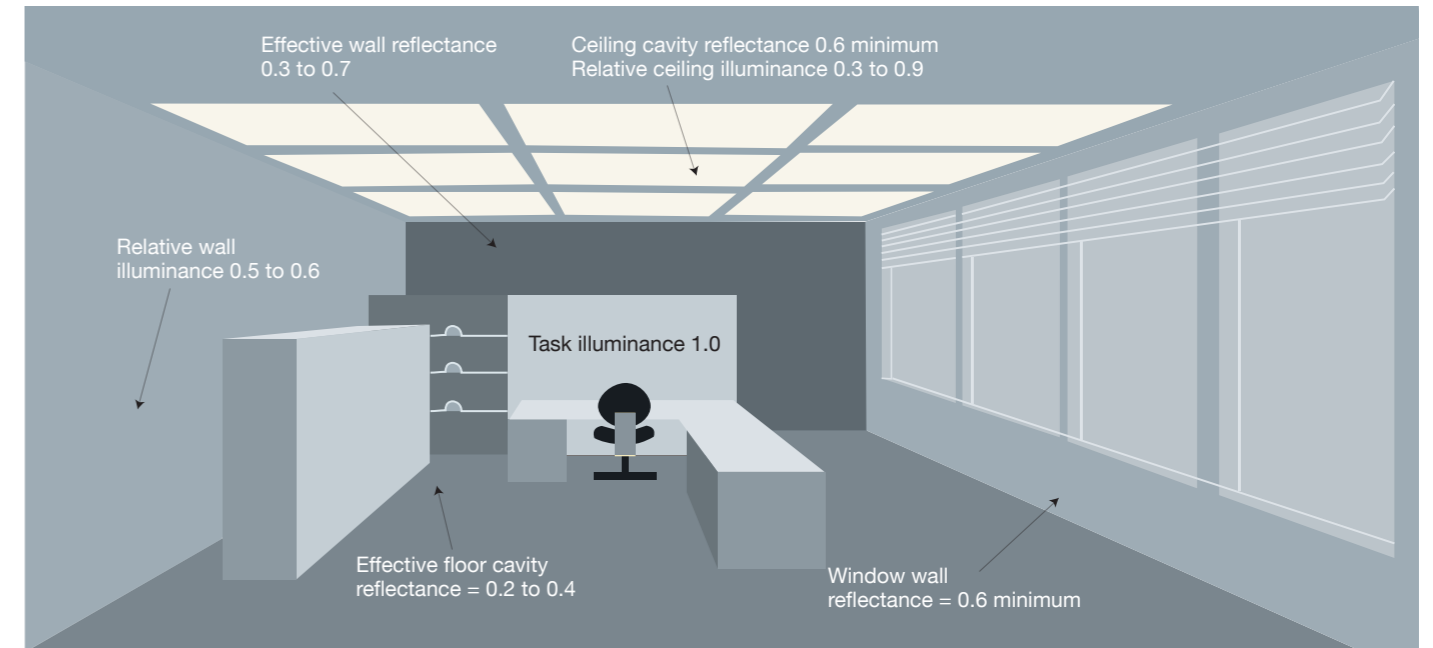
The 'Right Light', one of the strongest sensory impressions, acts as food to creativity, brings out the true potential in a space, facilitates explosion of new ideas, creates new visions and encourages people to come out with winning-edge innovations and revolutionising workplace environments.

Asserting on the quality of light that brings space to life and life to space, BRIGHTNESS MANAGEMENT Philosophy advocates:

- Visually balanced lighting that provides uniform light distribution in horizontal and vertical planes
- Low contrast in working area (near field)
- Low contrast on walls and ceilings (far field)
- Lighting for the space, not just for the work surface



The illustration below may better show the aims of surface Illuminance within LG7



The average wall illuminance above the working plane, from both the direct and reflected components, should be at least 50% of the average horizontal illuminance on the working plane (no one wall should be less than about 30%). We should aim for an even distribution on the vertical surface, and avoid scalloping and 'hot spots'.

For the ceiling not to appear dark, the average illuminance on the ceiling, from both the direct and reflected components, should be at least 30% of the average horizontal illuminance across the working plane.

In addition to the surface illuminance ratios, we must also consider areas where people are working with visual display equipments. Progress in modern screen technologies mean

that the most sophisticated flat screen equipment is much more tolerant with regards to surface glare reflectance. However, where we do not know the technologies which will be employed, LG7 states that we should limit surface brightness to 1500 cd/m² (based on the use of positive polarity, type I and II screens). This applies to both the ceiling and walls and is carried out at and above 65° angle of elevation.

The working plane illuminance figure is also largely governed by task at hand. The recommended maintained illuminance for office work is generally between 300 and 500 lux and it is recommended that this figure is made up of a combination of general ambient lighting and task lighting.

In summary, if you are achieving 500 lux on the horizontal working plane, then you should aim to achieve 250 lux on the walls (with no one wall being less than 150 lux) and 150 lux on the ceiling. No one surface should be brighter than 1500 cd/m² (subject to the software being used).

These figures can be achieved through a variety of lighting styles. All lighting designs and specifications should be undertaken with best practice as its ethos and designs, based around the principles and guidance of LG7, can only improve our working environments, adding value to the designer, client and perhaps most importantly of all, the end user.

Wipro Lighting brings you, BRIGHTNESS MANAGEMENT philosophy and LG7 guideline compliant products, WaveLED and IrisLED Gold Drop Down Diffuser.

WaveLED

Symphony in Light



Wave Shape Diffuser

The wave shape diffuser adds a different dimension to the workspace and gives a state-of-the-art look



Enhanced Performance

High Efficiency Translucence (HET) diffuser avoids dark patches and contrasts creating a perfect diffusion of light



Aesthetic Design

Sleek and seamless profile gives a neat, clean and clutter free look to the ceiling. It enhances the overall visual appearance of the modern workspaces



More Efficiency

High efficacy LEDs ensure an unvarying and optimum light output which creates a vibrant and uniform illumination while consuming significantly lesser energy and hence reduces LPD



Visual Harmony

A soft and soothing visual experience with uniform illumination enriches the work environment that ultimately helps in achieving the work task productively



Features	Convventional luminaire	LED luminaire
Luminaire Catalogue	2 x 36W	WaveLED - LM24-391-XXX-57-XX
Room Dimension	10m x 10m	10m x 10m
Mounting Ht. (m)	2.7	2.7
Quantity	16	16
System Watts	80	32
Avg. Lux Level Required	> 300	> 300
Uniformity	0.69	0.75
Total System Watts (KW)	1.28	0.51
% Saving		60%
Light Power Density (LPD)	12.8W/sqm	5.12W/sqm
LPD in W/sft	1.19 W/sft	0.47 W/sft



WaveLED
Symphony in Light
35W



IrisLED Gold
Drop Down Diffuser
11W | 14W

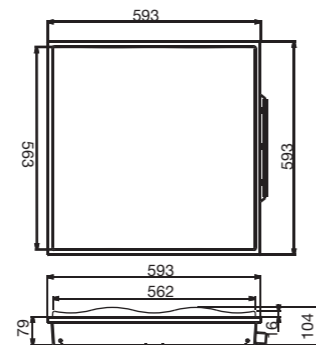
Specifications

- White powder coated CRCA housing
- Special virgin grade High Efficiency Translucence (HET) diffuser
- High luminous flux imported LEDs for better light output
- Electronic control gear duly wired up to the terminal block
- Designed and manufactured to comply with IS 10322 part 5/Sec 1 1987

Installation

- Designed for installation with four nos. of steel hook-up wire suspension to ensure correct leveling within ceiling aperture
- Suitable for 19mm ET cable entry through knock outs from top
- Suitable for Armstrong/ CRG/ TRAC/ USG/ Celotex/ POP** modular ceilings

Dimension Drawings



All Dimensions are in mm Tolerance ± 2 mm

Electrical Data

Cat. No.*	Luminaire Lumen OP (Lm)	Nominal System Wattage (W)	Rated Voltage (V)	Mains Current (A)	Approx. Weight (kg)	Case Lot (in nos)
LM24-391-XXX-57-XX	2790	35	240	0.17	3.8	01

*Other colour temperatures available on request. **Please get in touch with Wipro Team on POP installation.

LED is an ever improving and evolving technology. Wipro is committed to bring you the best in LED technology. Data given is representative and can change

Application



Specifications

- High power high efficiency Chip-On-Board (COB) LED module
- High Efficiency Translucence (HET) diffuser
- White powder coated, pressure die cast aluminum having superior thermal performance
- Aesthetic white rim in engineering plastic
- Specially designed, easy to install mounting clips
- Best in class driver pre-wired up to terminal block
- Suitable for POP / Armstrong modular ceiling system

Electrical Data

Cat. No.*	Luminaire Lumen OP (Lm)	Nominal System Wattage (W)	Rated Voltage (V)	Mains Current (A)	Approx. Weight (kg)	Case Lot (in nos)
LD71-101-XXX-65-DD	825	11	240	0.05	0.37	12
LD71-121-XXX-65-DD	1040	14	240	0.06	0.50	12

*Other colour temperatures available on request.

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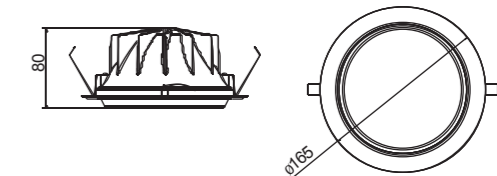
Application



Installation

- Provision for mounting with the help of specially designed mounting clips
- Flushed & Drop Down versions suitable for ceiling thickness from 6-19 mm
- Retrofit option suitable for ceiling thickness from 3-19 mm

Dimension Drawings



Cutout Size- $\phi 145$ mm

Dimension drawing remains same for 11W & 14W
All Dimensions are in mm Tolerance ± 2 mm

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- ★ Trustworthiness and Reliability of Wipro

switch to LEDs

Energy efficient LED luminaires from the Leaders in Green Building Lighting



ImmaculateLED Platinum



RadianceLED



IrisLED Platinum



IrisLED Gold Flushed Diffuser

Wipro Design

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