

# Specification Of GG-IND150W01

Product type: GG-IND150W01

Doc ID: SPEC\_GG-IND150W01\_V0.1\_20121109 Customer Use



## Revision history

Version	Date	Change Description	Author	Reviewer
V0.01	2015/11/09	Initial Version	Susan Su; Allen Chen	Mark Lau

## Document approval

Prepared by:		Checked by:		Approved by:	
Signature		Signature		Signature	
Date		Date		Date	

Prepared by(Customer):		Checked by(Customer):		Approved by(Customer):	
Signature		Signature		Signature	
Date		Date		Date	

# Introduction

## Purpose

This document is to define the requirements of the GG-IND150W01 for commercial LED light application. All items defined by Us in this file should be discussed and confirmed with the customer to make sure the final products can meet the customer requirements. In this application, the CC control of output is employed.

## Scope

The GG-IND150W01 is a LED light system including mechanical structure, side-cover, LED, diffuse, hang cable, LED driver, and will drive 288@120W or 336@150W LEDs of Osram or Lextar 5630 series.

## Application

The GG-IND150W01 Module will be used at workshops, shopping malls, factory buildings, office buildings, store houses, gas stations, stadiums and exhibition buildings.

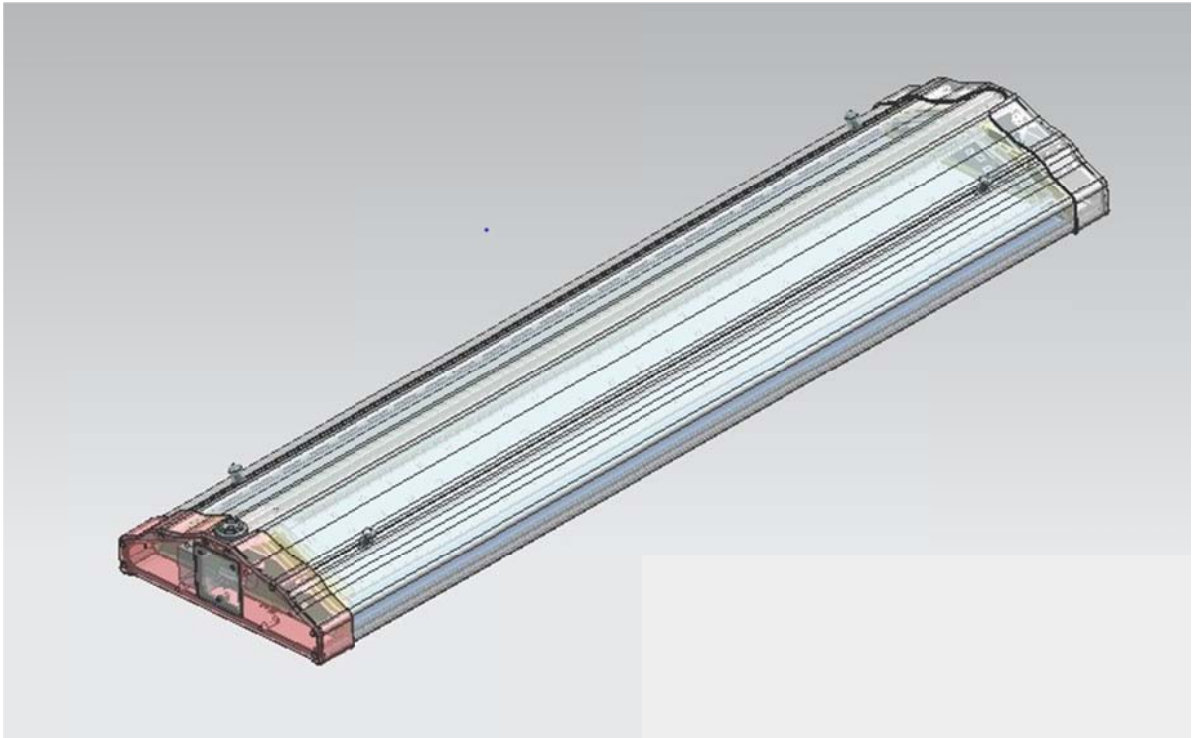
## Definitions and abbreviations

Table 1 Definition, Acronyms and Abbreviations

Item	Description
SPEC	Specification
IND	Industrial / Commercial LED High-bay Lighting
N.A.	Not Available
GG-IND150W01	Integrate high-bay light with 1200mm length
lm	Lumen
T.B.D	To be defined
Max	Maximum
Min	Minimum
CC	Constant current
OCP	Over current protection
OVP	Over voltage protection
UVP	Under voltage protection
CCT	Correlated color temperature

# General description

System diagram (Including perspective)



[Figure 1](#) GG-IND150W01 system diagram

## Power function block

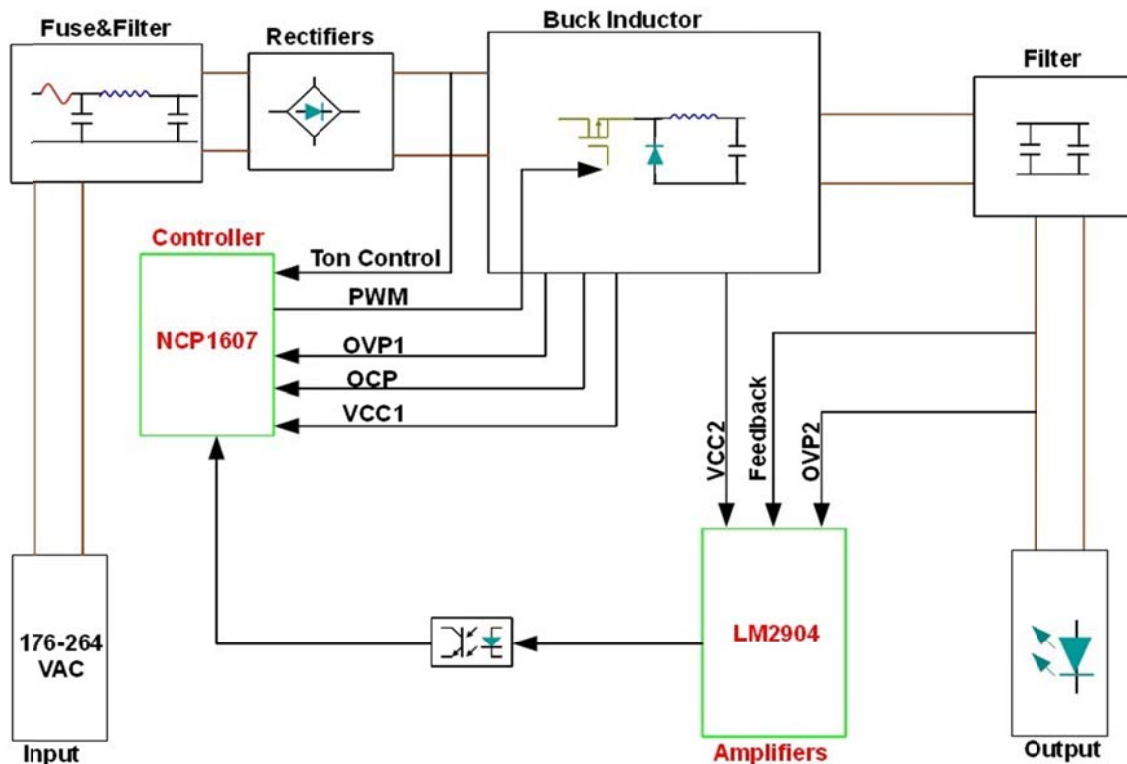


Figure 2 GG-IND150W01 function block

## Material requirements

- All components should meet RoHS and Lead-free.
- The manufacturing process should be Pb-free.
- All components exposed should meet flame retardance of UL94V0.
- The Tg of PCB should higher than 130°C and FR4 is preferred.
- X7R/C0G or better material for ceramic capacitor is preferred.
- The lifetime of the Al-Cap should be taken into account.

## Operational environment

### Temperature range

- Storage temperature range : -20°C ~ +85°C
- Operating temperature range : -10°C ~ +40°C

### Humidity range

- Storage humidity : +5% ~ +90%
- Operating humidity : +10% ~ +80%

# Mechanical requirements

## Installation

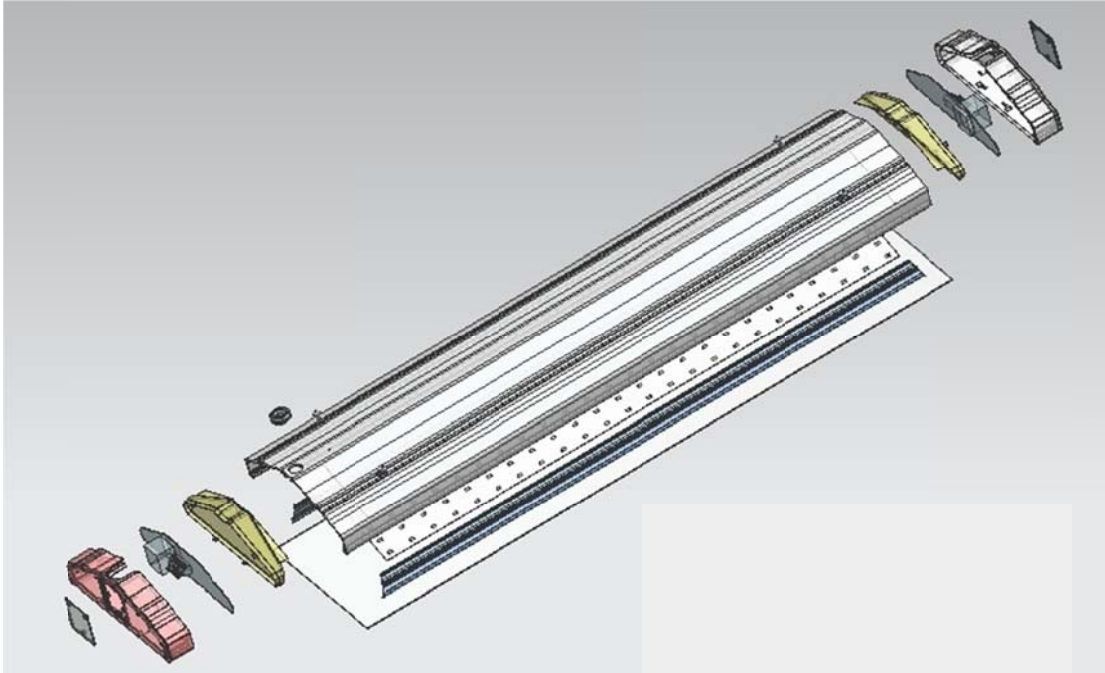


Figure 3 Installation

## Housing dimension

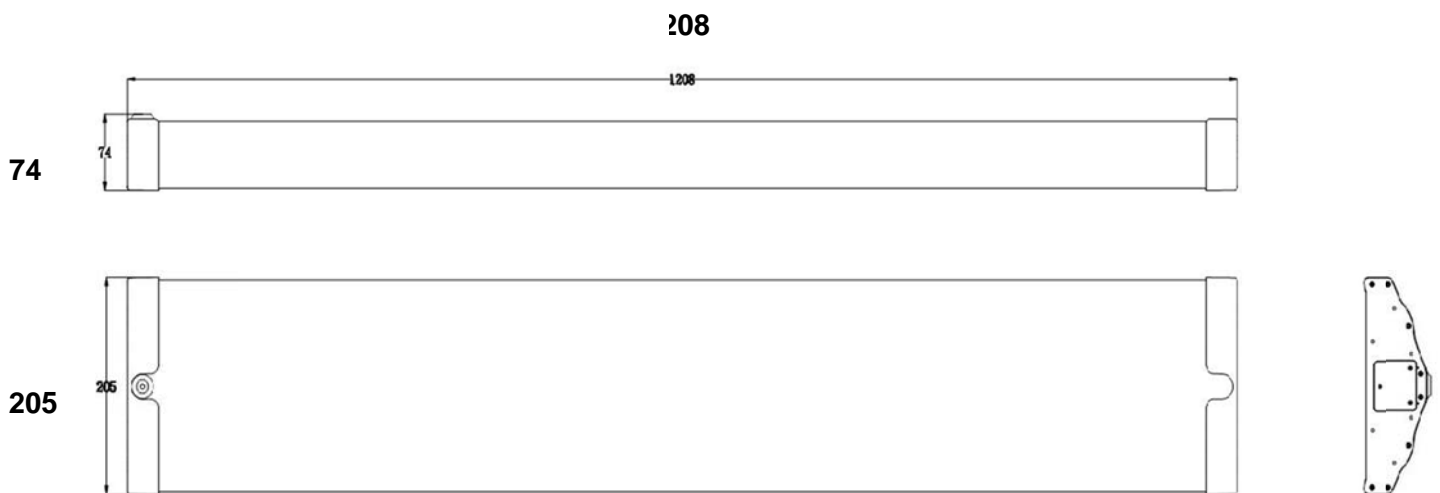


Figure 4 Housing dimension

## I/O connection type

Input : connector in side-cover; Output : connector

## Color

Lampshade : Black or Silver; Side-cover : White

## Material

Housing : Aluminum alloy; Side-cover : ABS/PC

## Weight

The weight of the GG-IND150W01 should be less than 5500 gram.

# Electrical requirements

## Input requirements

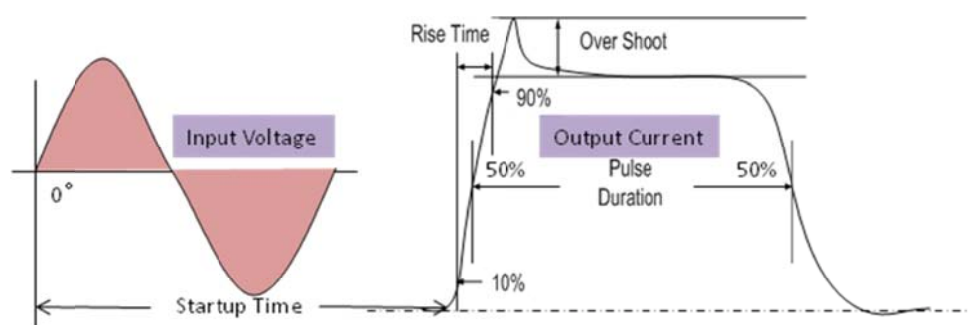
- Rated voltage : 200~240Vac
- Input voltage range : 176~264Vac
- Nominal frequency : 50/60Hz
- Input power : 150W @ 230Vac
- Input current : 0.8A @ 230Vac Power factor : >0.9

## Output requirements

- Rated output current : 1300mA@150W
- Rated output voltage : 110~130Vdc
- Output current precision(without ripple) :  $\pm 5\%$
- Total efficiency : up to 95%

## Start-up

The start-up waveform and the sequence will be as bellow:



**Figure 5** Input to output sequence

## Rise time

The rise time of LED current (from 10% to 90% of the setting current) should be less than 120ms.

## Protection requirements

When the output is abnormal, the GG-IND150W01 should enter to protection mode.

### Protection mode

Protection Item	Over load	Open load	Short circuit
Protection mode	Automatically limit to Defined value	Shut down and automatic restart	Shut down and automatic restart

### Over load

If output current exceeds 1200mA or voltage exceeds 160V, the output will be automatically limit to 1200mA/160V.

### Open load

The output of GG-IND150W01 should be open-circuit proof at following conditions:

- LED\_A open circuit
- LED\_K open circuit

If the open load occurred, the output should be shut down and automatically restart when the open load condition removed.

### Short circuit

The output of GG-IND150W01 should be short circuit proof at following conditions:

- LED\_A short to GND
- LED\_K short to GND
- LED\_ A short to LED\_K

After the short is occurred, the output should be shut down and automatically restart when the short circuit condition removed.



# Optical requirements

## Normal requirements

- LED components : Osram or Lextar 5630 series
- Number of output strings : 6@120W or 7@150W
- Number of LED components : 288@120W or 336@150W
- Light source life : 50000 hours
- Light output : 11400lm@120W or 13800lm@150W
- Color temperature : 5000~6500K
- Beam angle : 108°
- Color rendering index Ra : >80

## Distribution diagram

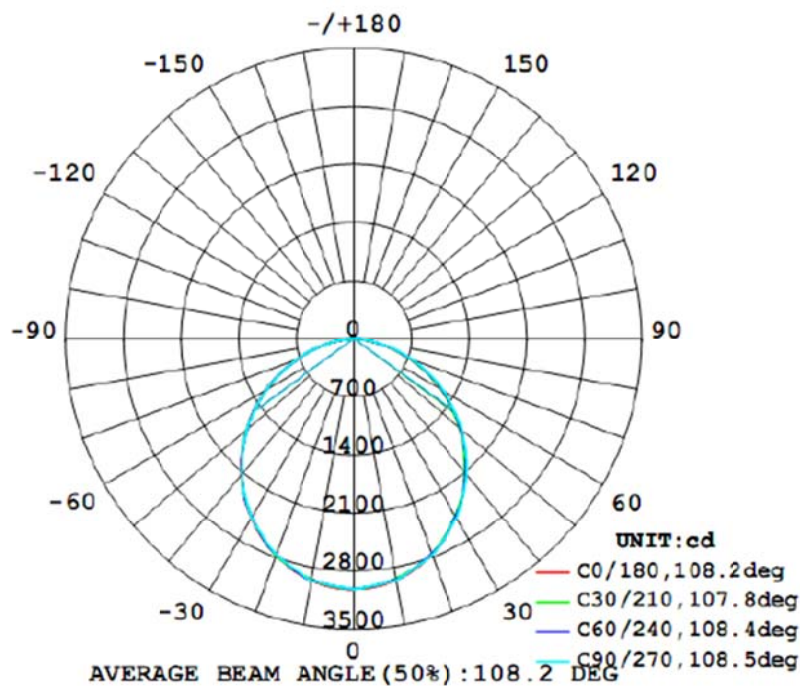


Figure 6 Distribution diagram

**(Please contact us for .IES files)**

# Performance Requirements

## General qualification requirements

The GG-IND150W01 should meet the Class protection class and meet the CE qualification.

- EN60598-1:2008
- EN60598-2-2:1996

## EMC requirements

- RFI : EN55015
- Immunity : EN61547
- Input current harmonic factor : According EN61000-3-2
- Input flicker and voltage fluctuation : According EN61000-3-3
- Dust/Water proof : IP54

## Lifetime

The lifetime of the GG-IND100W01 should be >50000hours under normal operating condition. This lifetime is defined according to the <70% luminous decay and no damage occurred.

