# SPECIFICATION

REFOND P/N

RF-MTB652T05-A1

□R&D

■Mass Product

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# 2.Product Specification /

## 2.1 Optical-electrical Characteristics(Absolute Maximum Ratings At Ts=25 )/

Tab.2-1Optical-electrical Characteristics

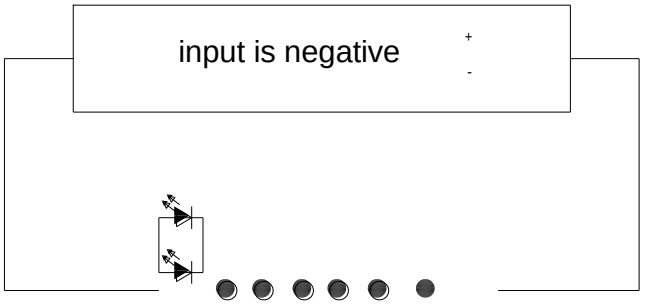
| Refond PN | | Module Characteristics | | | | |
|---|---|---|---|---|---|---|
| | Customer PN | Current mA | Voltage(V) | Power(W) | Module LM | |
| | | **Typ** | **Typ** | **Typ** | **Min** | **Max** |
| RF-MTB652T05-A1 6000-6500K | - | 205 | 24 | 5 ± 8% | 625 | 700 |
| Color Rendering Index | ≥ 80 | (V)Test condition | | Typ | | |
| | | 24 | | 24 | | |
| (MacAdamElipsis) | | | | ≤5 | | |

0 0 Absolute Maximum Ratings at Ts=25°C

| Parameter | Symbol | Rating | Units |
|---|---|---|---|
| Forward Current | $I_F$ | 205 ± 8% | mA |
| Peak Forward Current | $I_{FP}$ | 268 | mA |
| Reverse Voltage | $V_R$ | 5 | V |
| Electrostatic Discharge (HBM) | $E_{SD}$ | 2000 | V |
| Operating Temperature | $T_{OPR}$ | -40 ~ +85 | |
| Storage Temperature | $T_{STG}$ | -40 ~ +100 | |
| Junction temperature LED | $T_J$ | 115 | |

## 2.2 Product Schematic And Interface Definition/

Fig.2-2 Product connection




4P7S

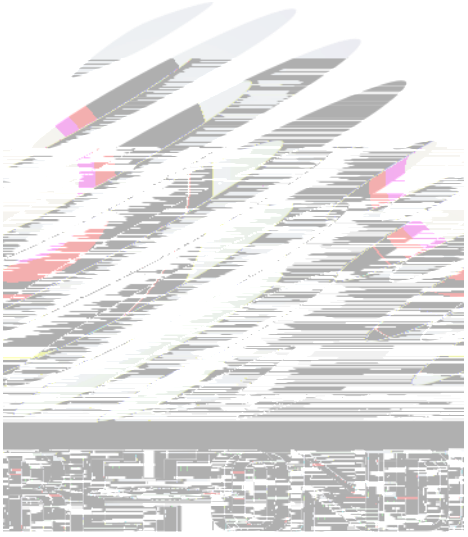
## 2.3 Product Module rule of naming :

**RF –MT B 65 2 T 05 – B 1**

1
Refond version number (1: the first version)
B
Product emitting light way B Top view
05 5W
Product power: 05:Product is 5W
H: 85≥T 80
Product CRI H: 85≥T 80
LED 2 2835
LED Package type 2 2835
65:6000-6500K
Product CCT 65:6000-6500K
B:
Product type (B: Freezer lights )

Module department code
RF:
Refond company abbrevitation(RF: Refond)

**3.**



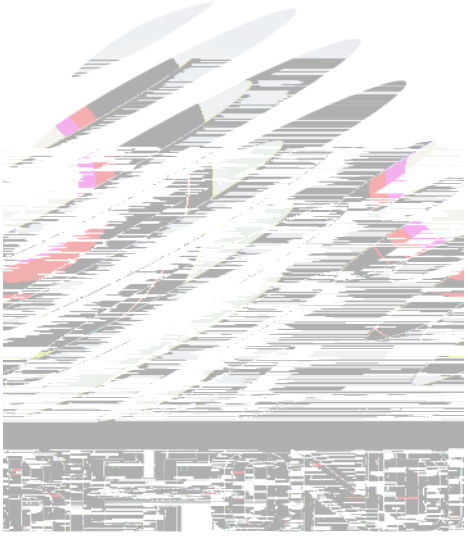
# 4. Product Reliability Test/

Tab 4-1 Light Bar Reliability Test

| Test Item/ | Test Conditions/ | Test Time/ | Number Of Test/ | Judgement Criterions/ |
|---|---|---|---|---|
| Operating Life At Room Temperature/ | $T_A$=25 $I_F$=250mA Tj<115 | 500Hrs | 0/6 | 1. Φ<30%, |

# 5. Product Materials Performance Test And Method At Ta=25 /

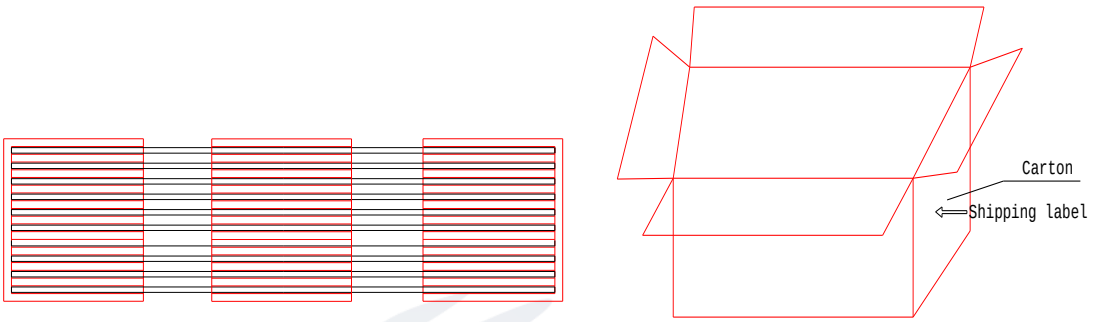
Tab 5-1Light Bar Materials Performance Test And Method Ta=25

| Test Item/ | Test Conditions/ | Test Methods/ |
|---|---|---|
| LED Optical-electrical Characteristics/LED | Compliance With Specifications/ | Integrating Sphere/ |
| Connector Pull Force/ |  | |

# 6.Packing Criterion/

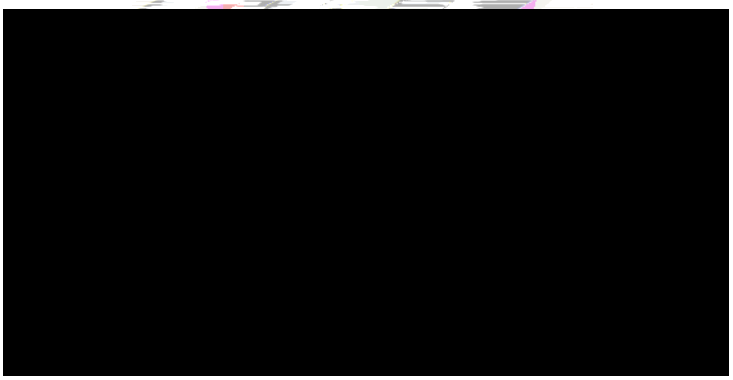
## 6.1 Package Diagram /

Fig 8-1Package Diagram /




## 6.2 Carton silk printing/

REFOND LOGOPay attention to identify

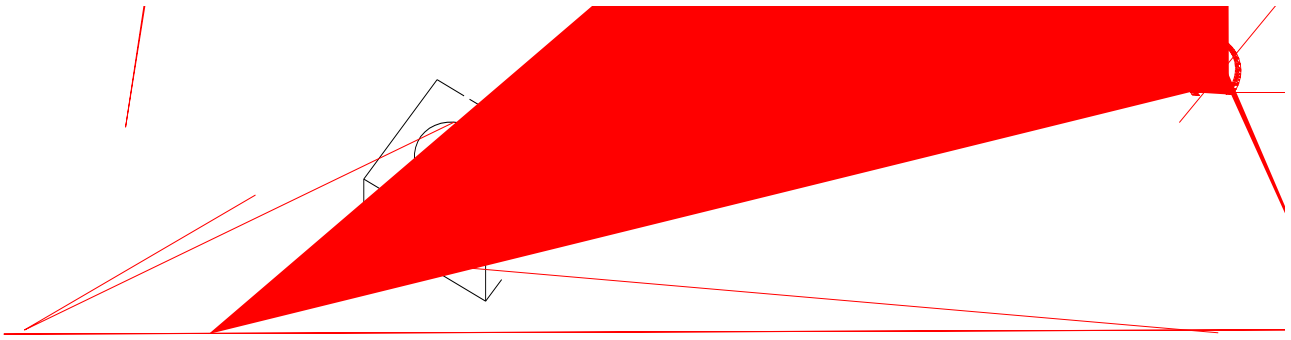


## 6.3Label Form Specification/

深圳市瑞豐光電子股份有限公司
REFOND SHENZHEN REFOND OPTOELECTRONICS CO.,LTD.

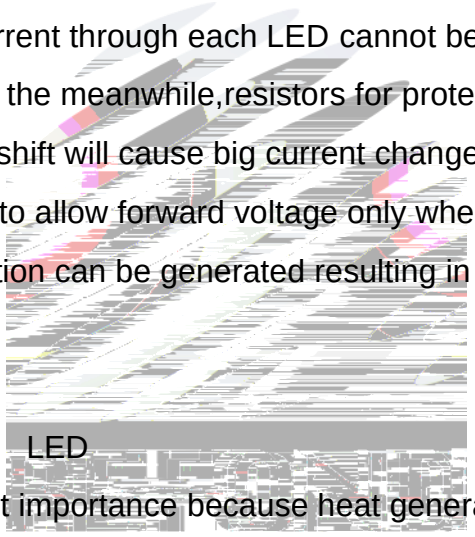
| | | | |
|---|---|---|---|
| | | | |
| customer PN | | | |
| /P.N | | | |
| /BIN CODE | | /LM | |
| /VF | | /CCT | |
| /CRI | | /QTY | |
| /N.W | | /DATE | |

(4) Handle the component along the side surface by using forceps or appropriate tools; do not directlytouch or Handle the silicone lens surface, it may damage the internal circuitry.



(5) In designing a circuit,the current through each LED cannot be exceed the absolute maximum rating specified for each LED. In the meanwhile,resistors for protection should be applied,otherwise slight voltage shift will cause big current change,burn out may happen. 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.

LED



LED

(6) Thermal Design is paramount importance because heat generation may result in the Characteristics decline,such as brightness decreased,Color change and so on.Please consider the heat generation of the LEDs when making the system design.LED

LED

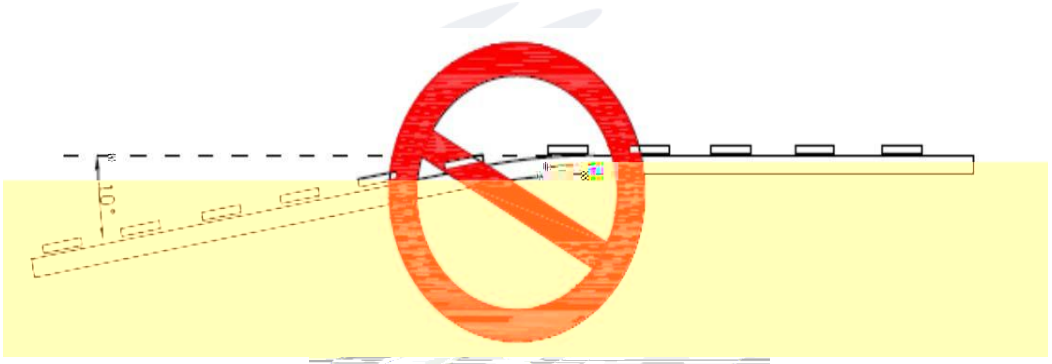
(7) Compared to standard encapsulants, silicone is generally softer, and the surface is more likely to attract dust，requiring special care during processing. In cases where a minimal level of dirt and dust particles cannot be guaranteed, a suitable cleaning solution must be applied to the surface after the soldering of components. Refond suggests using isopropyl alcohol for cleaning. In case other solvents are used, it must be assured that these solvents do not dissolve the package or resin. Ultrasonic cleaning is not recommended. Ultrasonic cleaning may cause

damage to the LED.

LED

(8)Similar to most Solid state devices; LEDs are sensitive to Electro-Static Discharge (ESD) and Electrical Over Stress (EOS). LED

9>.NO warping or twisting the Light Bar more than 10°. Forbidding holding the LED part or connector part when handling. 10° LED



(10) Other points for attention, please refer to our relevant information.

Version History/

| Date | Revisor | Version | Verifier | Remarks |
|---|---|---|---|---|
| 2021-4-13 | | E/0 | | The first edition |
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Declare

This specification is written both in English and in Chinese and the latter is formal.