MEGMEET®

SPECIFICATION
产品规格书

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Model : MP4355TX

Description: POWER SUPPLY & LED DRIVER SPECIFICATION

PREPARED BY 编写	CHECKED BY 审核	APPROVED BY 批准
梅鸿恩	邹荣波	崖志宏

深圳麦格米特电气股份有限公司

Shenzhen MEGMEET Electrical Co., Ltd

深圳市南山区高新区北区朗山路 13 号清华紫光科技园 5 层 A;B;C501-503;D;E

5th Floor, Tower A, B,C501-C503,D,E, Unis Inforport, No.13 Langshan Road, North Section, Hi-Tech Industrial Park, Nanshan District, Shenzhen, PEOPLE'S REPUBLIC OF CHINA

Tel: (+86)0755-8660 0500 Fax: (+86)0755-8660 0999

E-mail: megmeet@megmeet.com; Web:www.megmeet.com

Revision History

修订履历

Revision 版本/次	Change Item (修改项次)	Date (修改日期)
1. 0	Initial Release (初版发行)	2023-02-27
1.1	更新时序	2023-3-21
1.2	增加1200mA电流档位，LED由100W，改为110W,总功率由140W，改为150W	2023-4-12
1.3	更新 PWM 调光频率范围；DC 调光只能输入直流调光信号；更新背光时序；增加重量信息	2023-4-28

Content 目录

1. Electrical Specification 电气规格 5
1.1 Table 1 Input Electrical Characteristics（输入特性） 5
1.2 Output Electrical Characteristics（输出特性） 5
1.2.1 Table 2 Constant Voltage Output Specification（恒压输出规格） 5
1.2.2 Table 3 Constant Current Output Specification（恒流输出规格） 6
1.2.3 Table 4 DC Output Ripple & Noise. （输出纹波和噪声） 7
1.2.4 Table 5 Dynamic Response Of Output. （输出动态响应） 7
1.2.5 Table 6 Hold-Up Time（输出保持时间） 7
1.2.6 Table 7 DC Output Overshoot During Turn-On/Off（输出超调） 7
1.2.7 Table 8 DC Output Voltage Rise Time（输出上升时间） 8
1.3 Protection（保护功能） 8
1.3.1 Table 9 DC Output Over Current Protection（输出过流保护） 8
1.3.2 Table 10 DC Output Short Circuit Protection（输出短路保护） 8
1.3.3 Table 11 DC Output Over Voltage Protection（输出过压保护） 8
1.4 Table 12 Remote On/Off Control（遥控功能） 9
1.5 Table 13 The Backlight On/Off Control（背光控制） 9
1.6 Table 14 Adjust Backlight Brightness（调光） 10
1.7 Timing （时序图） 11
2. Safety （安全） 12
2.1 Standards（标准） 12
2.2 Precaution Class for protection against electric shock （防电击保护措施类别） 12
2.3 Insulation（绝缘性能） 12
2.3.1 Table 15 Insulation Resistance（绝缘阻抗） 12
2.3.2 Table 16 Dielectric strength（绝缘强度） 12
3. EMC （电磁兼容性） 12
3.1 EMI （电磁干扰） 12
3.2 EMS （电磁抗扰） 13
4. Environmental Requirement （工作环境） 13
4.1 Temperature （环境温度） 13
4.2 Humidity （环境湿度） 13
4.3 Altitude （海拔高度） 14
4.4 Climates （气候要求） 14
4.5 Cooling Method （冷却方式） 14
4.6 Vibration （振动耐受） 14
4.7 Shock（冲击耐受） 14

5. Dimension （物理尺寸） 14
6. Weight （重量） 14
7. Pin Connection (连接器脚位定义) 14
8. Power Supply Mounting （装配） 16
8.1 Power Supply Mounting（装配结构） 16
8.2 Mount Method（装配事项 ） 17
9. Package（包装） 17

1. Electrical Specification 电气规格

1.1 Table 1 Input Electrical Characteristics（输入特性）

Input Voltage Range 输入电压	AC90V to AC264V
Normal Voltage Range 标称输入	AC100V to AC240V
Frequency Range 频率范围	(50Hz or 60Hz)±5%
Max Input AC Current 最大输入电流	Max. 2.50A at full load and AC90V input
Inrush Current (cold start) 冷启浪涌电流	60A (peak) at AC100V 100A (peak) at AC240V
Efficiency 效率	83%Min. at AC240V input and full load
Harmonic Current 谐波电流	Meet GB17625.1or IEC61000-3-2 Class D
Touch Current 接触电流	Less than 0.25mA (RMS)
Standby Power Loss 待机功耗	≤0.5W at Vin≤240Vac,+5VSB’s Io≤20mA
Input Fuse 输入保险	T3.15A250V ~

1.2 Output Electrical Characteristics（输出特性）

1.2.1 Table 2 Constant Voltage Output Specification（恒压输出规格）

配置一：默认（MP4355TX）

Output Channel 输出通道	Output Rated Voltage 输出额定电压	Voltage Regulation 电压调整率	Min. current 最小电流	Rated current 额定电流 Full load	Peak current 峰值电流
V12	+12.0V	±5%	0.1A	5.0A	7.0A
V5	+5V	±5%	0	2A	2.5A
5VSB	+5V	±5%	0.02A	0.5A	0.8A

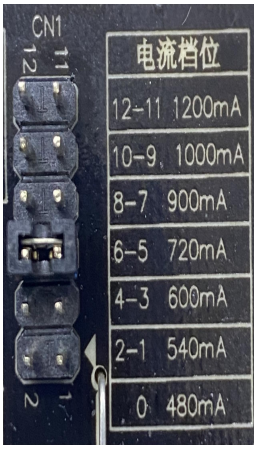
Note: The testing of peak current should be performed under other dc output load rating and the peak current pulse width within 100ms conditions.峰值电流的测试条件是其它负载为额定负载时测试，且脉宽小于 100 毫秒。

配置二：（MP4355TXA）

Output Channel 输出通道	Output Rated Voltage 输出额定电压	Voltage Regulation 电压调整率	Min. current 最小电流	Rated current 额定电流 Full load	Peak current 峰值电流
V12	+12.0V	±5%	0.1A	7.0A	8.0A

Note: The testing of peak current should be performed under other dc output load rating and the peak current pulse width within 100ms conditions.峰值电流的测试条件是其它负载为额定负载时测试，且脉宽小于 100 毫秒。

1.2.2 Table 3 Constant Current Output Specification（恒流输出规格）

Picture 图片	CN1 Position CN1 档位	Output Channel 输出通道	Output Voltage Rang 输出电压范围	Current Regulation 电流调整率	Output Rated Current 输出额定电流	
	12-11	LED1	50V-92V	±8%	1200mA	600mA
		LED2				600mA
	10-9	LED1	50V-110V	±8%	1000mA	500mA
		LED2				500mA
	8-7	LED1	50V-120V	±8%	900mA	450mA
		LED2				450mA
	6-5 默认	LED1	50V-150V	±8%	720mA	360mA
		LED2				360mA
	4-3	LED1	50V-180V	±8%	600mA	300mA
		LED2				300mA
	2-1	LED1	50V-180V	±8%	540mA	270mA
		LED2				270mA
	0	LED1	50V-180V	±8%	480mA	240mA
		LED2				240mA

Note:

1. LED 背光范围 50-180V，总电流最大 1.2A。
2. LED 输出总功率 P_{LED} ≤110W；
3. 电源输出总功率 P 总 ≤150W；

STB，V5，V12 降额 Derating:

D=(150W-P_{LED})/84W*100% @ P_{LED}≥66W

D=1 @ P_{LED}≤66W。

1.2.3Table 4 DC Output Ripple & Noise. （输出纹波和噪声）

Output Channel	Ripple & Noise (Peak-peak, 峰-峰值)	
	Ta:25℃	Normal Input and Full Load
V12	200mV	
V5	100mV	
5VSB	100mV	

Note: Ripple & Noise test 纹波和噪声测试

1)The Bandwidth of oscilloscope is set to 20MHz.
示波器带宽设置在 20 兆赫兹。
2)Use a 0.1uF ceramic capacitor in parallel with a 10uF electrolytic capacitor at output connector terminals for ripple & noise measurements.
输出端并联一个 0.1uF 的陶瓷电容和一个 10uF 的电解电容来测试纹波和噪声。
3） Ripple & Noise testshould be tested at other load rating.
纹波和噪声测试应该在其它各路额定负载时测试。

1.2.4Table 5 Dynamic Response Of Output. （输出动态响应）

Output Channel	Response Regulation of Output Voltage 输出电压响应调整率					
	Step Load	Slew Rate	Frequency Rang	Step Load	Slew Rate	Frequency Rang
	Min. to 50% or 50% to Rating	0.2A/us	50Hz~ 100Hz	Min. to Rating	0.2A/us	50Hz~ 100Hz
V12	±10%			±10%		
V5	±10%			±10%		

1.2.5Table 6 Hold-Up Time（输出保持时间）

Output Channel	Hold-Up Time			
	AC100V Input	Full Load	AC240V Input	Full Load
V12	≥10 ms		≥10 ms	
V5	≥10 ms		≥10 ms	

1.2.6Table 7 DC Output Overshoot During Turn-On/Off（输出超调）

Output Channel	Overshoot voltage 超调电压 & Normal Input	
	Turn-on 开机	Turn-off 关机
V12	≤10%	≤10%
V5	≤10%	≤10%

Note: All of dc output current from Min. to Rating 测试时负载范围：最小到额定。

1.2.7Table 8 DC Output Voltage Rise Time（输出上升时间）

Output Channel	Rise time	
	AC100V Input and Full Load	AC240V Input and Full Load
V12	≤100 ms	≤100 ms
V5	≤50 ms	≤50 ms

Note: The rise time measured is when the output voltages rise from10% to 90% of specified output voltage observed on the channel waveform.
上升时间为输出电压从 10%上升到 90%的时间。

1.3 Protection（保护功能）

1.3.1Table 9 DC Output Over Current Protection（输出过流保护）

Output Channel	Over Current	Comments
V12	≥6.0A	Hiccup / latch off 保护后重启/锁死
V5	≥3.5A	Hiccup / latch off 保护后重启/锁死

Note: The Over Current Protection should be tested at other load rating.
过流保护测试应该在其它各路额定负载时测试。

1.3.2Table 10 DC Output Short Circuit Protection（输出短路保护）

Output Channel	Comments
V12	Hiccup / latch off 保护后重启/锁死
V5	Hiccup / latch off 保护后重启/锁死

Note: The Short Circuit Protection should be tested at other load rating.
短路保护测试应该在其它各路额定负载时测试。

1.3.3 Table 11 DC Output Over Voltage Protection（输出过压保护）

Output Channel	Over Voltage	Comments
V12	15V~20V	Hiccup/Shutdown 打嗝/关机

Note: The Over Voltage Protection should be tested at Max. AC voltage and Min. load.
过压保护测试应该在最大交流输入电压和轻载下测试。

1.4 Table 12 Remote On/Off Control（遥控功能）

PS-ON Signal	Comments	Outputs
PS-ON - High	≥3.0V&2.0mA	Output
PS-ON - Low	≤0.5V	X
PS-ON -Open	--	X

1.5 Table 13 The Backlight On/Off Control（背光控制）

BK Signal	Comments	Outputs
BK-High	≥3.0V&2.0mA	Output
BK-Low	≤0.5V	X
BK-Open	--	X

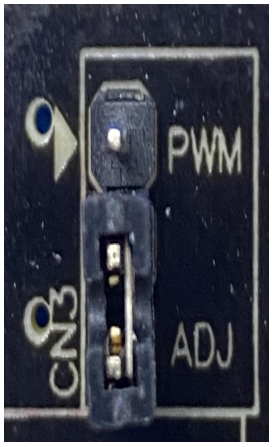
The Constant Current Outputs should be controlled by a signal(BK),The signal level must be between 0-5V.
恒流输出受控于一个 BK 信号，此信号电平需在 0-5V 之间。

* When BK is pulled to High, the constant current outputs are to be enabled.
  BK 高电平，打开输出。
* When BK is pulled to Low, the constant current outputs are to be disabled.
  BK 低电平，关闭输出。

1.6 Table 14 Adjust Backlight Brightness（调光）

This power supply can accept DC and PWM dimming modes. The short-circuit jump cap installed at CN3 PWM is PWM dimming, and the short-circuit jump cap installed at CN3 ADJ is DC dimming.

此电源可以接受 DC 和 PWM 两种调光模式，CN3,PWM 处安装短路跳帽为 PWM 调光，CN3 ADJ 处安装短路跳帽为 DC 调光。如下图

Picture	CN3	PWM /ADJ Signal	Comments
	PWM	PWM-High	≥3.0V≤5V&2.0mA
		PWM-Low	≤0.5V
		PWM-Duty	10%-100%
		PWM-Frequency	150Hz - 40kHz
	ADJ 默认	ADJ-High	0V 或悬空
		ADJ-Low	3.0V≥ADJ≤ 5V&2.0mA

During PWM dimming mode, the ADJ pin must be connected to a PWM signal. This PWM signal can adjust the brightness of backlight, The wider the PWM signal duty cycle is, the brighter the backlight is. The signal level must be between 0-5V.

PWM 调光时，ADJ 脚需接 PWM 信号。此 PWM 信号能调节背光亮度，PWM 信号占空比越宽，背光越亮。此信号电平需在 0-5V 之间。

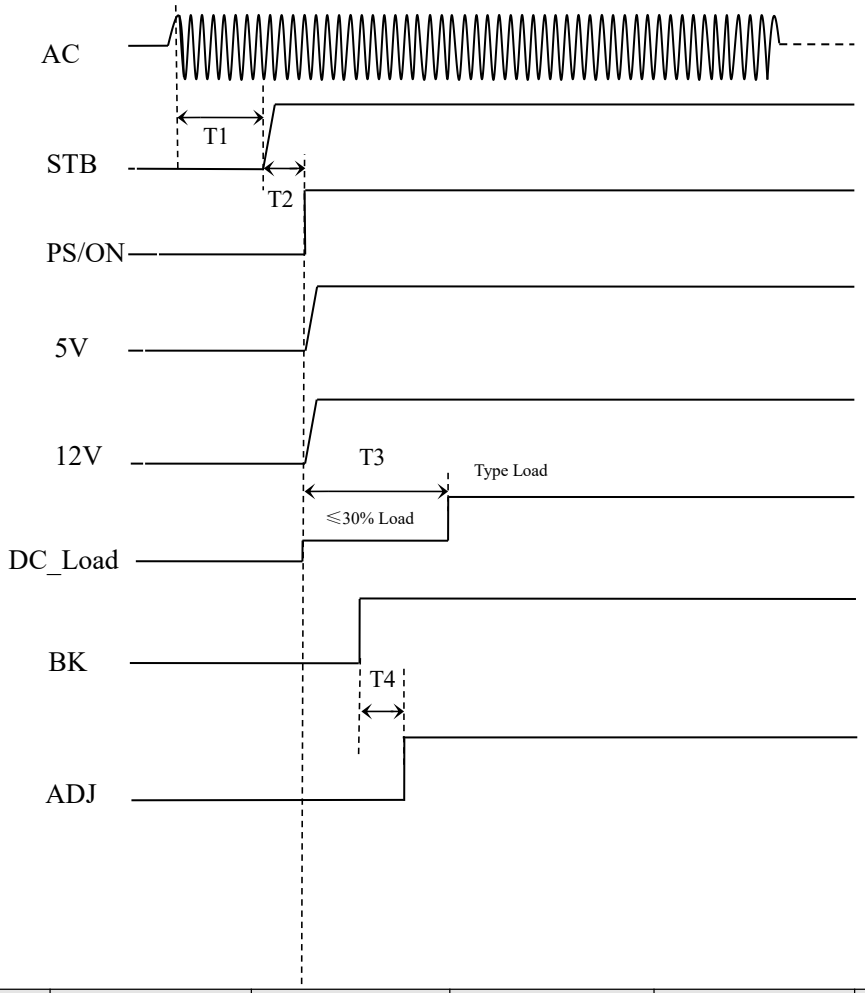
During DC dimming, the ADJ pin is connected to the external input voltage signal. The higher the voltage, the darker the backlight brightness, and the lower the voltage, the brighter the backlight brightness. This voltage signal needs to be between 0 ~ 5V.

DC 调光时，ADJ 引脚接外部输入电压信号，电压越高，背光亮度越暗，电压越低，背光亮度越亮，此电压信号需要在 0~5V 之间。

Note: The customer selects the dimming mode according to the demand, and selects the installation position of short-circuit jump cap.

注意：客户按照需求选择调光模式，并选择短路跳帽安装位置。

1.7 Timing （时序图）



Parameter	MIN	TYP	MAX	Unit	Notes
T1	-	-	3	Sec	
T2	100	-	-	mS	
T3	-	-	1	Sec	
T4	50	-	-	mS	
-	-	-	-	mS	

Note： AC power on STB output, turn on PS-ON, then turn on ADJ and finally input BK signal .

注意：AC 上电 STB 输出后开启 PS-ON、开启 BK，最后输入 ADJ 信号。

2. Safety （安全）

2.1 Standards（标准）

The power supply shall comply with the following Standards:
电源安全满足下列标准：

1) IEC/EN62368-1
2) UL62368-1
3）GB4943

2.2 Precaution Class for protection against electric shock （防电击保护措施类别）

Class II

2.3 Insulation（绝缘性能）

2.3.1Table 15 Insulation Resistance（绝缘阻抗）

Input To Output	≥50MΩ (with DC500V at room temperature)

2.3.2Table 16 Dielectric strength（绝缘强度）

Input To Output	AC3000V 50Hz 1minute ≤10mA

3. EMC （电磁兼容性）

3.1 EMI （电磁干扰）

The power supply shall comply with the following Standards:
电源电磁干扰满足下列标准：

1) Conduction Emission : （传导干扰度）
*CISPR32
*EN55032
*GB13837
*FCC PART15B

2) Radiated Emission： （辐射干扰度）
*CISPR32
*EN55032
*GB13837
*FCC PART15B

Note：The power board should be assembled in customer product to test for passing the above criterion.需配合用户电路整机通过上述标准。

3.2 EMS （电磁抗扰）

3.3 The power supply shall comply with the following Standards:

电源电磁抗扰满足下列标准：

1) ESD （静电抗扰度）
*GB17626.2
*IEC/EN61000-4-2
±6kV/±8kV Class B

2) EFT （脉冲群抗扰度）
*GB17626.4
*IEC/EN61000-4-4
2kV 5k Hz/100k Hz Class B

3) SURGE （雷击浪涌）
*GB17626.5
*IEC/EN61000-4-5
2.0kV/4.0kV Class B

4. Environmental Requirement （工作环境）

4.1 Temperature （环境温度）

* Operating 工作温度: -10℃ to +40℃.
* Storage 存储温度: -20℃ to +80℃.

4.2 Humidity （环境湿度）

* Operating 工作: From 10%to90% relative humidity (non-condensing).
* Storage 存储: From 5% to95% relative humidity (non-condensing).

4.3 Altitude （海拔高度）

* Operating: Less than 5000m（适用于在海拔低于 5000 米条件下使用）
* Storage: Less than 5000m （适用于在海拔低于 5000 米条件下储存）

4.4 Climates （气候要求）

* For tropical climates（适用于热带气候）

4.5 Cooling Method （冷却方式）

* Ventilation cooling . 风道自然冷却

4.6 Vibration （振动耐受）

* 10-55Hz, 19.6m/s²(2G), 20minutes each along X, Y and Z axis.

4.7 Shock（冲击耐受）

* 49m/s²(5G),11ms, once each X, Y and Z axis.

5. Dimension （物理尺寸）

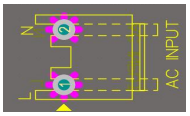
*180 mm X 180mm X 16mm(元件面高) (长 L *宽 W * 高 H).

6. Weight （重量）

约 290g

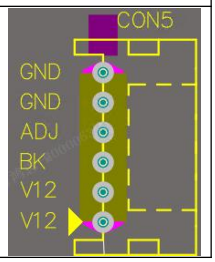
7. Pin Connection (连接器脚位定义)

Table 17 CN101(2Pin)

NO.	Pin Connection	Function	Picture
①	L	AC INPUT LINE	
②	N	AC INPUT NUTURE	

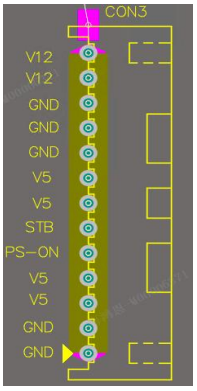
Note: TYPE : pitch7.92m

Table 18 CON4(6Pin)

NO.	Pin Connection	Function	Picture
①②	V12	V12 CHANNEL DC OUTPUT	
③	BK	BACKLIGHT ON/OFF CONTROL SIGNAL INPUT	
④	ADJ	DIMMING SIGNAL INPUT	
⑤⑥	GND	SIGNAL&V12 CHANNEL RETURN	

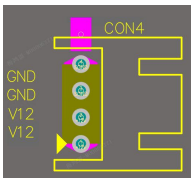
Note: TYPE : pitch2.0mm

Table 19 CON3(13Pin)

NO.	Pin Connection	Function	Picture
⑤	PS-ON	SMPS ON/OFF CONTROL SIGNAL INPUT	
⑥	STB	STB CHANNEL DC OUTPUT	
①②⑨⑩⑪	GND	SIGNAL&V12 &V5CHANNEL RETURN	
⑫⑬	V12	V12 CHANNEL DC OUTPUT	
③④⑦⑧	V5	V5 CHANNEL DC OUTPUT	

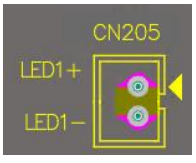
Note: TYPE : pitch2.5mm

Table 20 CON4(4Pin)

NO.	Pin Connection	Function	Picture
①②	V12	V12 CHANNEL DC OUTPUT	
③④	GND	V12 CHANNEL DC RETURN	

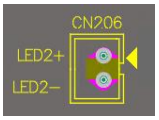
Note: TYPE : pitch2.5mm

Table 21 CN205(2Pin)

NO.	Pin Connection	Function	Picture
①	LED1+	LED1 CHANNEL CURRENT OUTPUT	
②	LED1-	LED1 CHANNEL CURRENT RETURN	

Note: TYPE : pitch2.0mm

Table 22 CN206(2Pin)

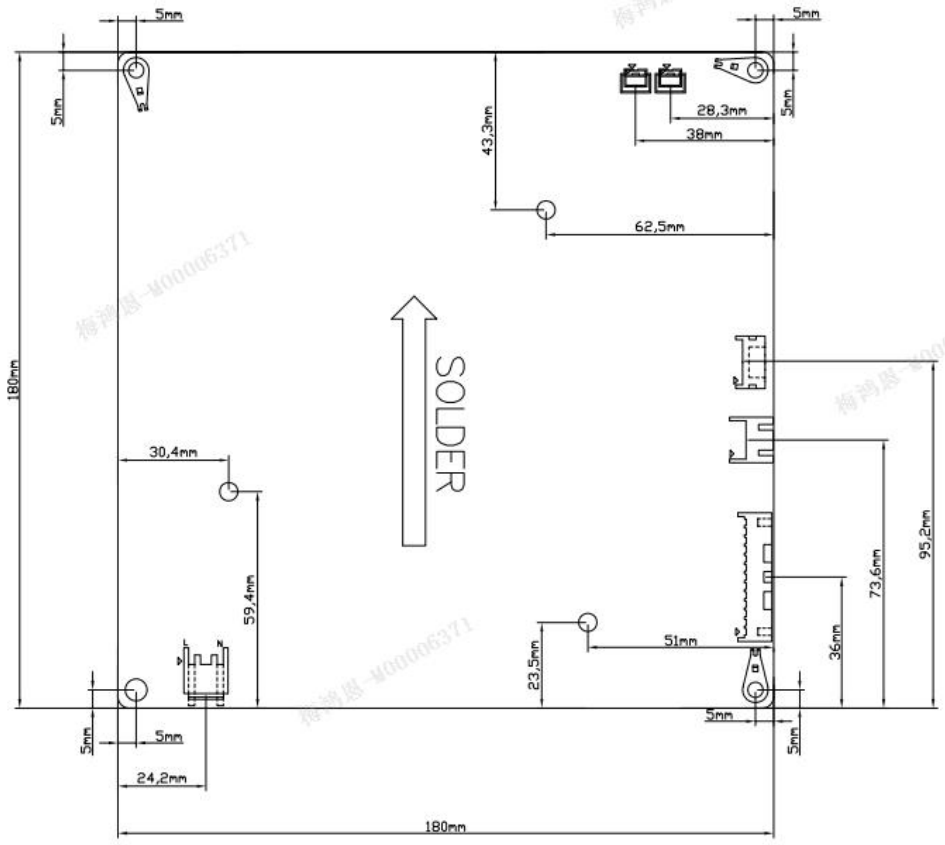
NO.	Pin Connection	Function	Picture
①	LED2+	LED2 CHANNEL CURRENT OUTPUT	
②	LED2-	LED2 CHANNEL CURRENT RETURN	

Note: TYPE : pitch2.0mm

8. Power Supply Mounting （装配）

8.1 Power Supply Mounting（装配结构）

Note: The image shown here is indicative only. If there is inconsistency between the image and the actual product, the actual product shall govern.(此图片仅供参考。若图片与实物有所不同，则以实物为准。)



8.2 Mount Method（装配事项 ）

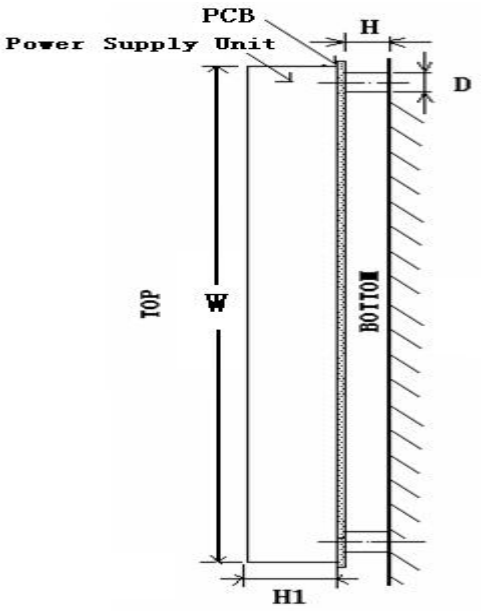


Table 20

D	6.0mm
H	≥3.5mm
	≤8.0mm
H1	≤16mm ±0.5mm
W	180mm

9. Package（包装）

1．Carton (Internal Package)

1）Packing Form：

Corrugated fiberboard box

2）Packing Method：

2．Packing Specification

Item	Specification
Model	MP4355TX
Carton size	/mm（Outside dimensions）
Quantity	/CTN
Gross weight	/kg
Net weight	/PCS