USB Communication Protocol of Laser Power Base

Serial port baud rate: 19200

I. Data direction: from PC to power socket

1、Switching laser

Start				End
F4	03	A7	XX	F9
			Output Switch Command	

Description:

XX=00 Turn off the laser drive.

XX=01 turn on the laser drive.

2、Set the signal source

Start				End
0xF4	0x03	A2	XX	0xF9
			Signal Source	

XX=00, internal signal

XX=01, external signal

3、Set the maximum current

Start				End
F4	03	A3	XX	F9
			Maximum Current	

XX=0-255

Unit mA

Start					End
F4	03	A3	XX	YY	F9
			Maximum Current		

XX=256-1000 (depending on the driving power supply current range)

Unit mA

4、Set the temperature

Start				End
F4	03	AA	XX	F9
			Set temperature	

XX=50-255

Set the temperature =XX/10, for example: XX=200, set temperature at 20.0°C

Unit°C

Start					End
F4	04	AA	XX	YY	F9
			Set the temperature	Set the temperature	

XXYY=256-500

Set temperature =XXYY/10, for example: XXYY=400, set temperature at 40.0°C

Unit°C

5、Set the current scanning period

Start				End
F4	03	A4	XX	F9
			Sawtooth scanning time	

XX=20-200

Unit: ms

6、Set the initial current

Start				End
F4	03	A5	XX	F9
			Set current value	

XX=0-255

Unit: mA

Start					End
F4	04	A5	XX	YY	F9
			Set temperature	Set temperature	

XXYY: 256-maximum current value

Unit: mA

7、Set termination current

Start				End
F4	03	A6	XX	F9

XX=0-255

Unit: mA

Start					End
F4	04	A6	XX	YY	F9
			Set temperature	Set temperature	

XXYY = 256-1000 (according to the maximum current set by the power socket and the allowable current of the power socket)

Unit: mA

Notes:

1. The default maximum current for startup is 0. You need to set the maximum current first.
2. When setting the current, send it in the order of setting cycle, starting current and ending current.
3. When the starting current is equal to the ending current, that is, the constant current driving mode, the scanning period is ignored.
4. The ending current is greater than or equal to the starting current value.
5. The interval time between each group of instructions is greater than 200ms.

II. Data direction: from power socket to PC terminal

Start					End
C5	AA	BB	XX	YY	ZZ
	Set temperature of power base		Measured temperature of power supply		

AABB: set temperature×10, for example: AABB=200, set temperature is 20.0°C

Unit°C

XXYY: measured temperature× 10, for example: XXYY=200, measured temperature is 20.0°C

Unit°C

ZZ: Warning indication, over-temperature and over-voltage are detected in the power base, etc.