MAX 创鑫激光

MFPT 20~100 脉宽可调脉冲光纤激光器

使用手册

版权说明

“ ”

引 语

MFPT

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MFPT

2

第一章 特性说明

MFPT 20~100M

1066 ± 3nm S

MFPT 20~100M Class 4

第二章 安全信息

1 -

	
	
	

Class

100W 1060nm

2-

1

2

LaserVision USA Kentek Corporation Rochwell Laser Industries

3-

1

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3

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4

MFPT 20~100M 24VDC

	+24VDC
	GND

DC 24 VDC

5

1

2 4

5cm

3

6

1

2

3

4

5

6

7

4-

Laser Institute of America(LIA)

13501 Ingenuity Drive, Suite 128

Orlando,Florida 32826

Phone:407 380 1553,Fax: 407 380 5588

Toll Free:1 800 34 LASER

American National Standards Institute

ANSI Z136.1, American National Standard for the Safe Use of Lasers

(Available through LIA)

International Electro-technical Commission

IEC 60825-1,Edition 1.2

Center for Devices and Radiological Health

21 CFR 1040.10 - Performance Standards for Light-Emitting Products

US Department of Labor - OSHA

Publication 8-1.7 - Guidelines for Laser Safety and Hazard Assessment.

Laser Safety Equipment

Laurin Publishing

Laser safety equipment and Buyer ’ s Guides

第三章 产品描述

1-

MFPT

MOPA

1060nm 10KW

, 25Pin

1

2

3

4 25

1 2

2-

MFPT-20M/S	20W
MFPT-30M/S	30W
MFPT-50M/S	50W
MFPT-70M	70W
MFPT-100M	100W

品牌名称	类别种类	产品系列	系列种类	系列代码
M:MAX 激光中国芯	F:Fiber laser 光纤激光器	P: Pulsed 脉冲	空缺：默认脉宽不可调 (Q-Switch 声光调 Q)	MFP
			T: Tunable 脉宽可调	MFPT
			P:Picosecond 皮秒	MFPP
			F: Femtosecond 飞秒	MFPF
			N：Nano 小型化	MFPN

第四章 详细规格

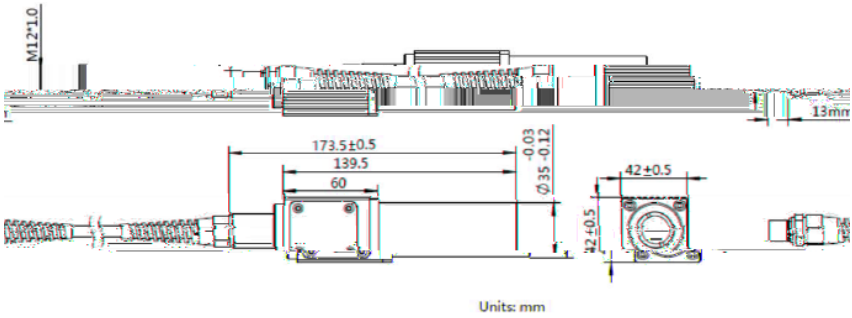
1-

	MFPT-20M/ S-0.8	MFPT- 30M/S-1.1	MFPT- 50M/S-1.1	MFPT- 70M-1.1	MFPT- 100M-1.8
Pnom(W)	≥ 20	≥ 30	≥ 50	≥ 70	≥ 100
(mJ)	0.8	1.1	1.1	1.1	1.8
(ns)	2~350		2~500		10-500 1
(kHz)	1~4000				
(mm)	5~7				6~8
	≤ 1.3	≤ 1.3	≤ 1.4	≤ 1.5	≤ 1.6
(%)	≤ 5				
(V)	24				
(W)	120	150	220	300	400
(nm)	1066 ± 3				1060~1070
3dB nm	10~15				≤ 15
(%)	10~100				
( )	0~40				
( )	-10~60				
Pout=Pnom 10%~90%(us)	300				
Pout=Pnom 10%~90%(us)	200				

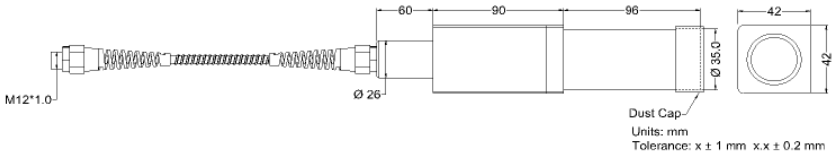
(mm)	287 × 219 × 95	355 × 266 × 120		360X264X120
(kg)	6	8	11	12

2-

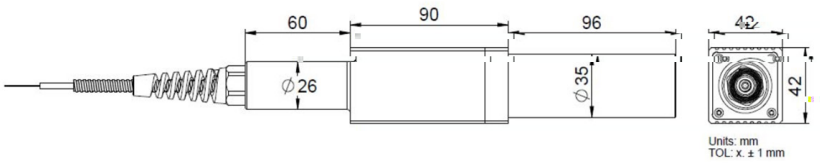
(MFPT-20~50M/S) mm



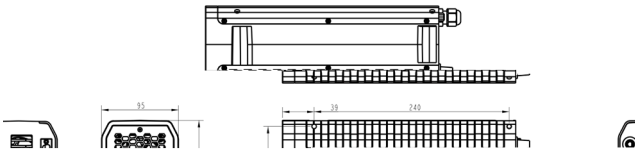
(MFPT-70M) mm



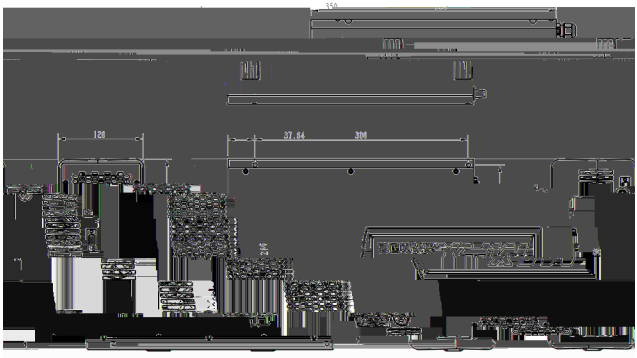
(MFPT-100M) mm



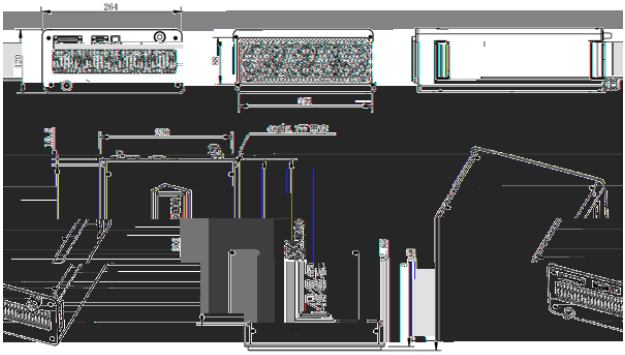
(MFPT-20M/S) mm



(MFPT-30~70M) mm



(MFPT-100M) mm



第五章 使用指南

	1

1 -DB25

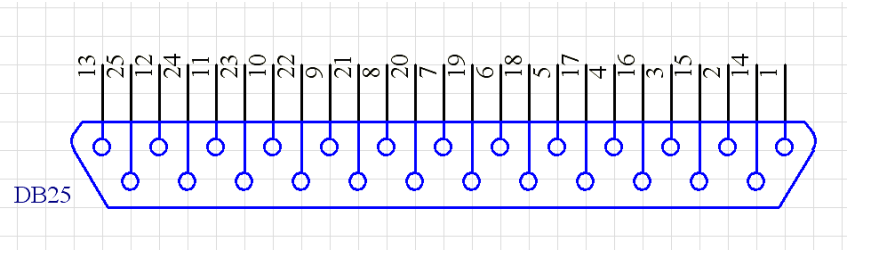
1

Pin TTL

TTL

Pin #	
1-8 D0-D7	1. 16 0-FF 10 0-255 LSB(D0) Pin1, MSB(D7) Pin8 - 00h(0): - FFh(255): - 00h.
	2. DB25.22 D1 D2

9	
14 15	
11 12 16 21	
17	+5 ± 0.25V DC
18	MO
	: MO
	: MO
19	booster /
	: booster
	: booster
20	( )
22	1. ( ) /
	2. ,
23	: :
24 25	



2 DB-25

1 DB25

2 Pin1~8 8bit Pin1 LSB Pin8 MSB Pin

0~255 0~100%

	1	2	3	4
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	1
6	0	0	1	1
7	0	1	1	1
8	1	1	1	1
	50%	75%	87.5%	93.75%

3 9 1 8 9

9 1US 1 8

1 9 2 µs

10KHz 100

µs

4 11,12,16,21 11 12

12	11	16	21	
X	X	L	L	
X	X	H	L	PD &
X	X	L	H	
X	X	H	H	PD

18,19 11

12,16,21

1

1

5 18 (EE) 5 ms
19 (EM)

18 PCB 18
ON 18 18
PCB 19 19

6 19 19 10
19

EE 5ms EM EE EM ON
EM ON EE ON 5ms
EM ON 19 PCB 19
EM ON 19 PCB
18

7 20 20
0.1 0.9

8 22
22 Pin2

Pin3

19 EM 18 EE

19 19

9 23

18 19

18 EE 19 EM 2us 23

2 -

1

1

2 DB25 5.2.2

DB-25

3

18,19,22	
23	
20	

4

5 24 V DC 10

6 1 8 9

7 18 EE ON

8 5ms

9 19 19
ON/OFF

10 ON/OFF EM OFF 500ms
EE

11 EE,EM 18 19
12

2
1 20

20
20
20
2 20
20
3 1 8 9
/

4 18 19
5 EE ON EM OFF,

6 EE ON EM ON 1 8

7 22 EE EM OFF
EE EM ON
18 19 22 EE EM ON
8 24 V 5 V

9 22

10

11 12 16 21

11 11

12 16 21

1 EE EM

12 Pin16

Pin21

24 VDC

3 -

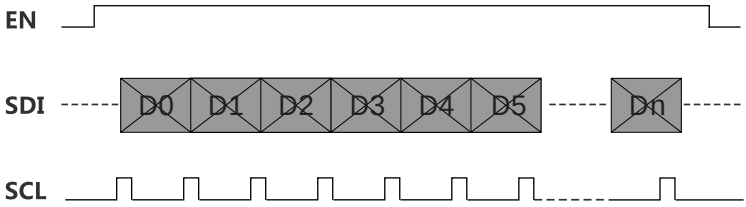
1

DB25 25 PIN1 - PIN25

DB25-PIN2 - SDI

DB25-PIN3 - SCL

DB25-PIN22- EN



EN

2

4 BYTE 32 bit

[HEAD] ->[PULSEWIDTH]

2 BYTE 2 BYTE

HEAD = 0x A501

PULSEWIDTH=

10ns, 0x A501000A 32bit

4 -

1

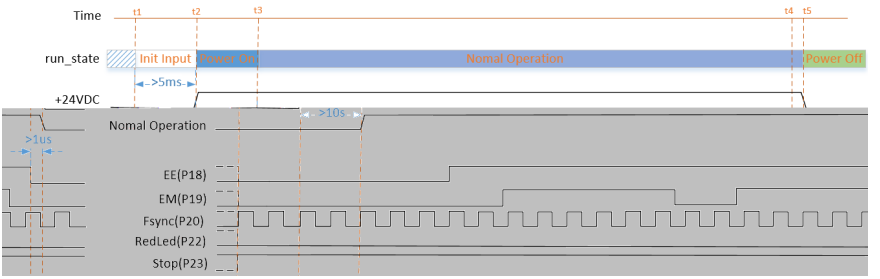
1

5 ms

10 s

2

EE 1 μs



2

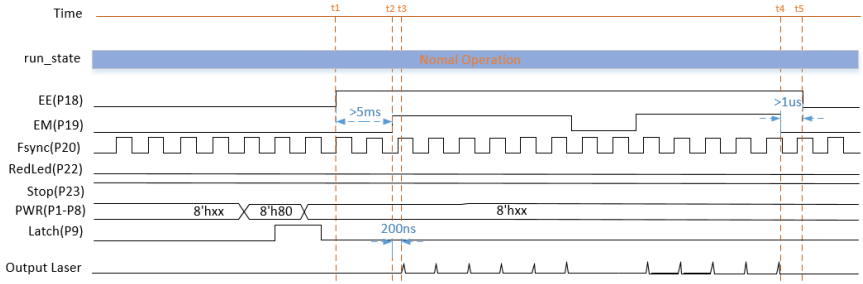
1

EE 5 ms EM EM

200 ns

2

EM 1 µs EE



3

1

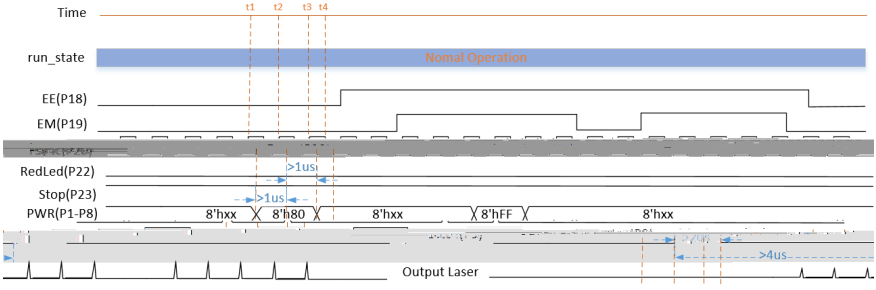
PWR 1 µs Latch

2 µs latch PWR latch

1 µs

2

4 µs



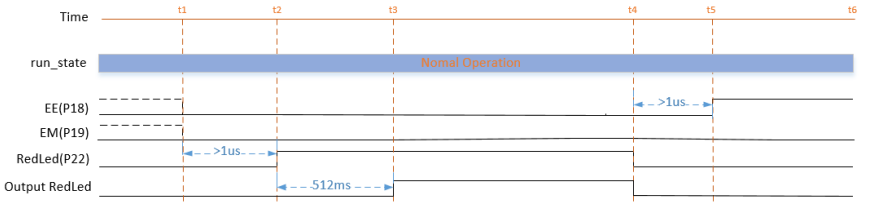
4

1

EE EM 1 μs RedLed 512 ms

2

RedLed 1 μs



5 STOP

1 Stop

Stop Stop

100 ms

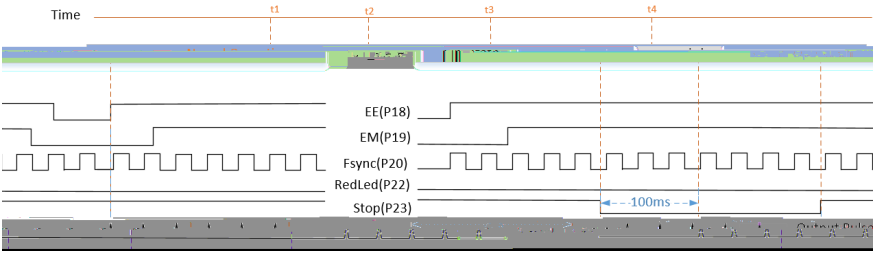
20M 70M 50us

2

Stop

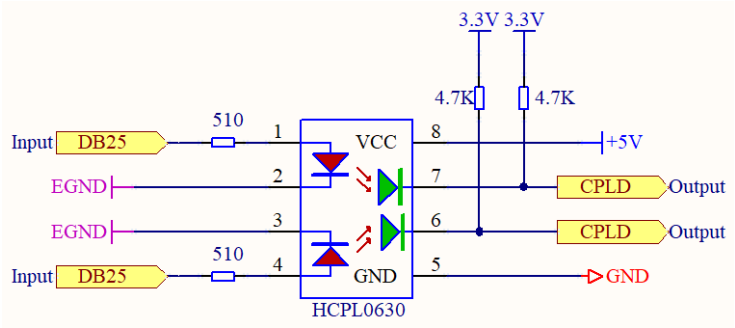
1000 ms

20M 70M 50us



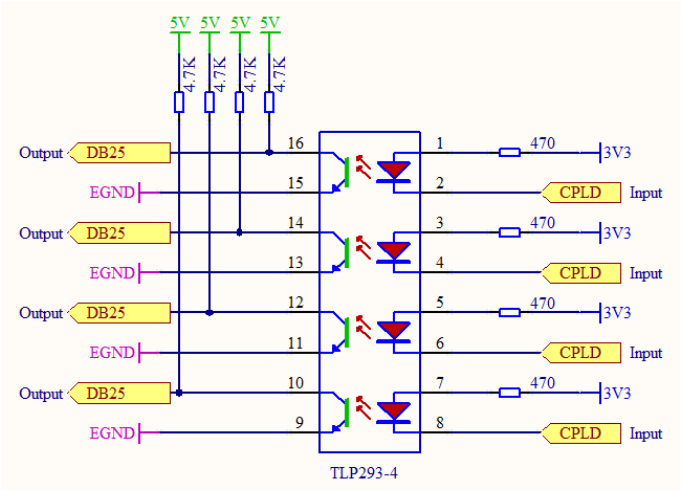
5 -

1



5 mA 15 mA

2



5 V(Pin 5 V) 50 mA

6 -

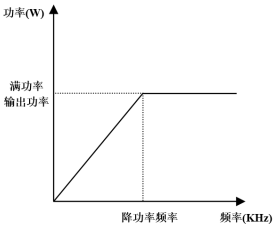
MFPT

/

/ns	MFPT-20M/S	MFPT-30M/S	MFPT-50M/S	MFPT-70M	MFPT-100M
500	/	/	45	63	55
450	/	/	45	65	55
400	/	/	45	68	55
350	28	28	51	69	58
300	28	28	53	72	63
250	30	30	55	76	70
220	32	32	57	80	75
200	34	34	59	82	80
180	36	36	61	85	85
160	38	38	63	89	/
150	40	40	66	92	98
135	44	44	70	96	/
125	48	48	75	101	/
120	/	/	/	/	120
100	54	54	85	113	150
80	60	60	95	131	170
60	68	68	110	162	200
50	75	75	120	194	230
40	90	90	140	260	270
30	105	105	180	400	340
20	140	140	240	800	500
15	170	170	310	1000	680
10	230	230	500	1200	1100
8	320	320	650	1400	/
5	450	450	1050	1600	/
2	1200	1200	2000	2400	/

1

2



MFPT-30M

350ns 28KHz

28KHz ,

7 -

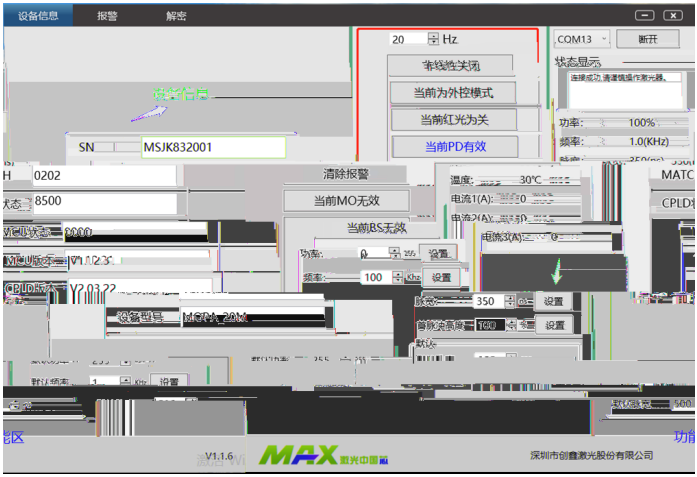
20-70

1.

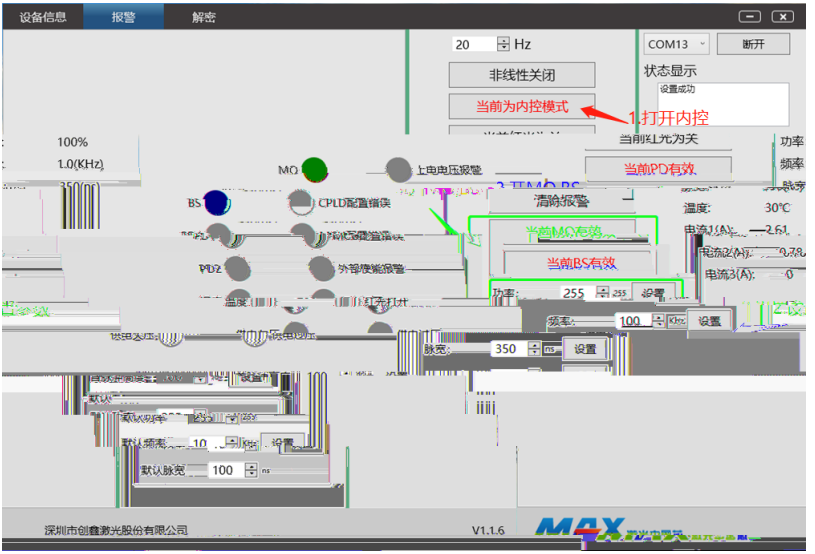
2.


设备信息
报警
解密
SN
MATCH
CPLD状态
MCU状态
MCU版本
CPLD版本
设备型号
20
Hz
非线性关闭
当前为外控模式
当前红光为关
当前PD有效
清除报警
当前MO无效
当前BS无效
功率:
频率:
首脉冲高度
默认
默认功率
默认频率
默认脉宽
COM13
连接
状态显示
功率:
100.0%
频率:
90(KHz)
脉宽:
50(ns)
温度:
25℃
电流1(A):
0.0
电流3(A):
0.0

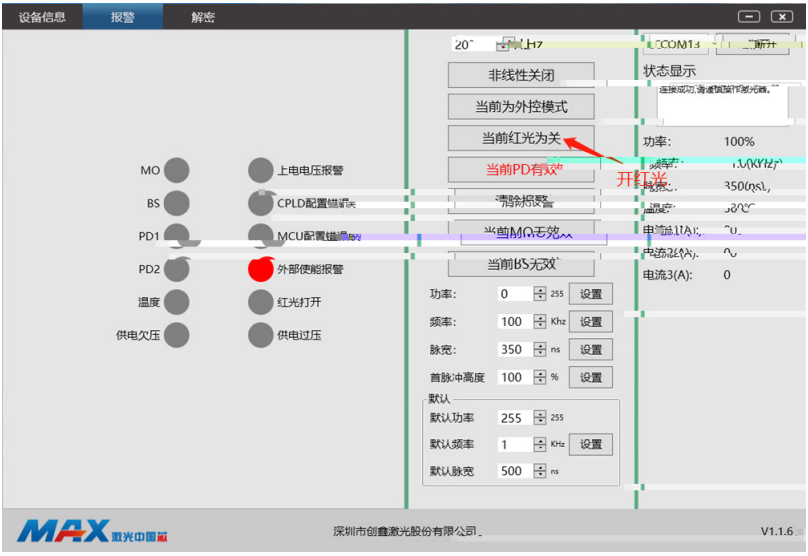
3. “ ”


设备信息
报警
解密
SN
MSJK832001
20
Hz
非线性关闭
当前为外控模式
当前红光为关
当前PD有效
清除报警
当前MO无效
当前BS无效
COM13
断开
状态显示
功率:
100%
频率:
1.0(KHz)
温度:
30℃
电流1(A):
V1.1.6
深圳市创鑫激光股份有限公司

4.


设备信息
报警
解密
20
Hz
COM13
断开
状态显示
非线性关闭
当前为内控模式
1.打开内控
当前红光为关
当前PD有效
清除报警
温度:
30℃
当前MO无效
当前BS有效
功率:
255
设置
频率:
100
Khz
设置
脉宽:
350
ns
设置
电流3(A):
0
默认
默认脉宽
100
ns
深圳市创鑫激光股份有限公司
V1.1.6

5.


设备信息
报警
解密
非线性关闭
当前为外控模式
当前红光为关
开红光
当前PD有效
清除报警
当前MO无效
当前BS无效
状态显示
功率:
100%
MO
BS
PD1
PD2
温度
供电欠压
上电电压报警
CPLD配置错误
MCU配置错误
外部使能报警
红光打开
供电过压
功率:
0
255
设置
频率:
100
Khz
设置
脉宽:
350
ns
设置
首脉冲高度
100
%
设置
默认
默认功率
255
默认频率
1
Khz
设置
默认脉宽
500
ns
电流3(A):
0
深圳市创鑫激光股份有限公司
V1.1.6

6.

7. ”

”

MO:MO

BS: BS

PD1/PD2 PD

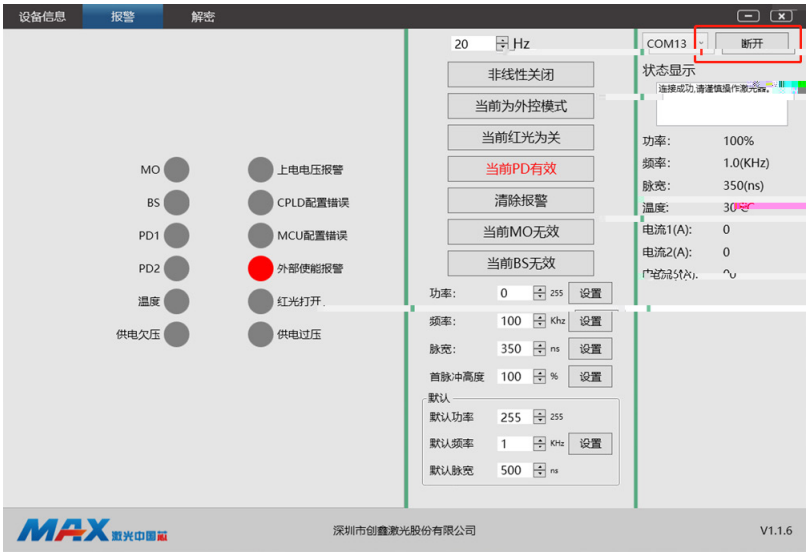
:

/

:

CPLD/MCU :

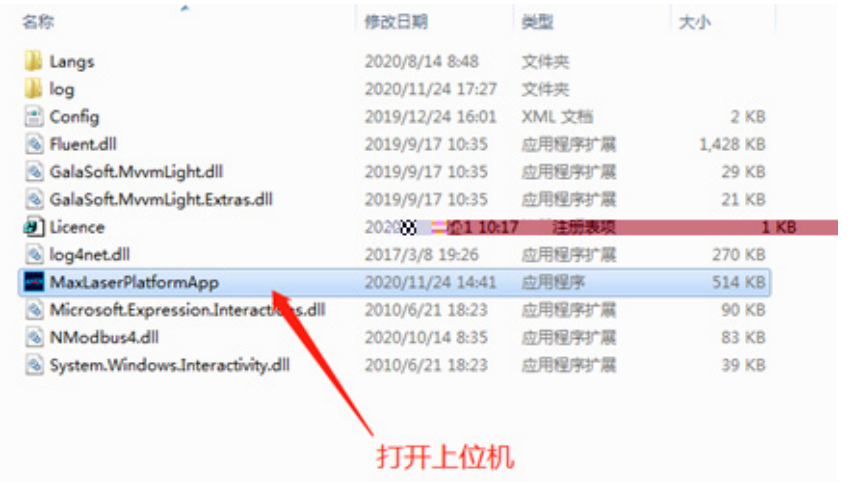
8. ” ”



100M

1

1 RS232



2 RS232 COM

IP IP IP

3

3.1

3.2 “ ”

“ PD ” “ ”

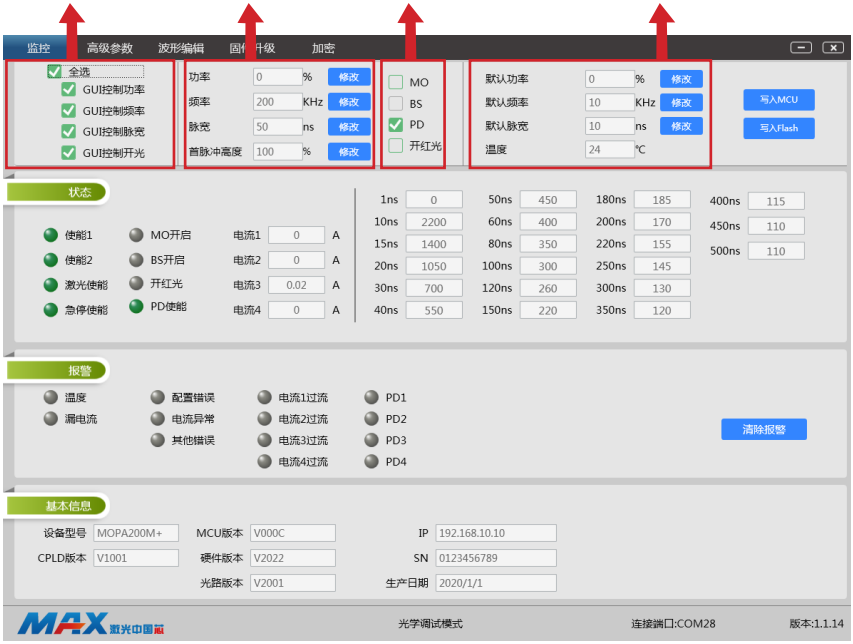
“ MO ” “ BS ”

“ PD ”

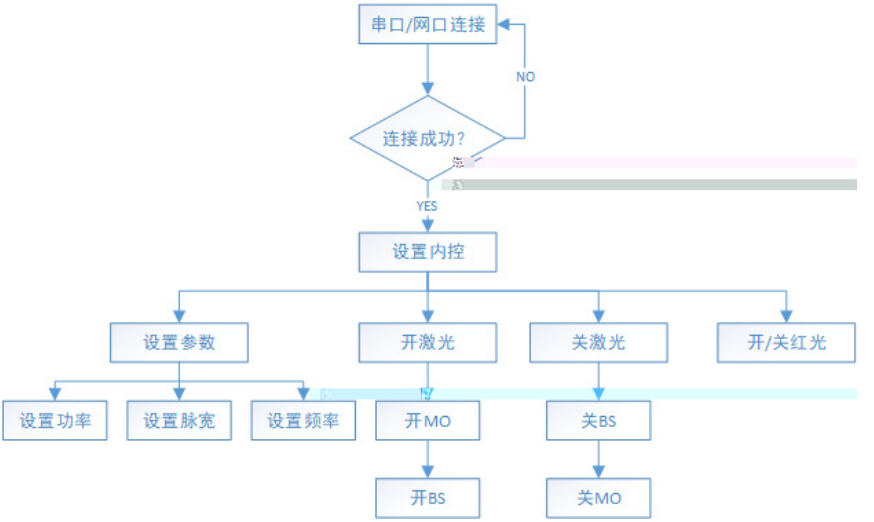
“ ”

ENTER “ ”

“ MO ”.“BS”



2



1 MO BS

2 BS

3 RS232/

第六章 常见故障处理

1 -

1

2

3

4

5 DB25

6 PIN18 PIN19

7 DB25

2 -

1

2

3

4

5 2

6

7

第七章 服务与维修

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2 -

400-900-9588

第八章 保修声明

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1
2
3
4
5
6