

## Low power Laser Engine Command List

### Agreement Information

Doc #	AG000002
PIC Model #	NA
Revision	V1.0
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Note: The following can be sent to customers.

**Table 1: RS232 Communication Settings**

Parameters	Settings
Port	UART
Baud Rate	115200
Data Bit	8
Start Bit	1
Stop Bit	1
Parity Bit	None
Flow Control	None

## Command List and Examples

### 1. Laser information

Sample Command	Sample Answer
GET PN	A PN xxxxxx
GET MN	A MN PAVILION INTEGRATION CORP.
GET SN	A SN LD_488/638/405#xxxx
GET TEL	A TEL 4084538801
GET CONTACT	A CONTACT 2528 Qume Dr.,Ste 1,SAN JOSE,CA95131
GET VER	A VER PIC08Vx.x.x
GET MDATE	A MDATE xxx,xxxx

### 2. Set Light State (ON/OFF) (SET CH)

Sample Command	Sample Answer	Function
SET CH 3 1	A CH	Turns the channel laser ON or OFF. 1 = ON; 0 = OFF.

### 3. Get Light State (ON/OFF) (GET CH)

Sample Command	Sample Answer	Function
GET CH 3	A CH 1	Get the channel laser state. 1 = ON; 0 = OFF.

#### 4. Set Light Power Reference (SET PWRREF)

Sample Command	Sample Answer	Function
SET PWRREF 3 20	A PWRREF	Set CH3 Power Level to 20 mW

#### 5. Get Light Power Reference (GET PWRREF)

Sample Command	Sample Answer	Function
GET PWRREF 3	A PWRREF 20	Get the set power of CH3

#### 6. Get Light Output Power (GET CHPWRWATTS)

Sample Command	Sample Answer	Function
GET CHPWRWATTS 3	A PWRREF 20.04	Get the output Power of CH3

#### 7. Get BT Temperature(GET BT)

Sample Command	Sample Answer	Function
GET BT 3	A BT 27.05	Get CH3 Baseplate temperature

#### 8. Get DT Temperature(GET DT)

Sample Command	Sample Answer	Function
GET DT 3	A DT 24.85	Get CH3 Laser temperature

#### 9. Get Status (GET STATUS)

Sample Command	Sample Answer	Function
GET STATUS 3	A STATUS 10001100	Get CH3 Status

#### 10. Get Fault (GET FAULT)

Sample Command	Sample Answer	Function
GET FAULT 3	A FAULT 00000000	Get CH3 Fault

## 11. Get Light Wavelength (GET WAVELENGTH)

Sample Command	Sample Answer	Function
GET WAVELENGTH 3	A WAVELENGTH 405	Get CH3Wavelength

**Table 2: Status code Bit Definitions**

Mask	Bit Label	Description
00000001	Laser Fault	Laser head faults
00000010	Laser Off	Laser Off status
00000100	Laser Emission	Laser Emission status
00001000	Laser Ready	Laser Ready status
10000000	System cover Interlock	System cover interlock status

**Table 3: Fault code Bit Definitions**

Fault Code Bit Definitions				
Mask	Bit Label	Description	Action	Range
00000001	Base Plate Temp. Fault	Base plate temperature out of range	Laser shutdown	>40 or <10 °C
00000010	Diode Temp. Fault	Diode temperature out of range	Laser shutdown	>40 or <10 °C
00000100	Over Current	High current for the diode		>0.98maxcurrent
00001000	Over Power	Fail to emit at set power lever		<0.85 or>1.15times of set power value