

Serial Protocol v1.0 for LED F3000/F5000 light source

- Serial communication: USB virtual serial port or RS-232 (9600 baud, 8n1)
- each command must be ended with <CR> (ASCII code 13 decimal) or <LF> (ASCII code 10 decimal) character, or both. Space is not a valid separator between commands.
- there is no receive timeout for serial communications; only <CR> and <LF> are used to end input
- commands and parameters are case insensitive (lower and upper characters can be mixed)
- numeric parameters and return data are in ASCII decimal representation
- extra space or underscore ("_") characters are allowed inbetween command and parameters
- commands are echoed in standard format to confirm execution, if they have been accepted
- "Error: <reason>"<CR> is returned if a command or parameter is invalid, or the transmission has been disturbed. <reason> is "syntax" for unknown or misspelled commands, "value" for wrong parameter data
- changes made from the control panel of the device or other inputs are indicated by the appropriate status report, unless status reporting is turned off

Example:

command "B75"<CR> sets brightness to 75%, and returns "B75"<CR>

command "S?"<CR> returns "S0"<CR> (shutter status: off, not in standby)

Command	Parameter(s)	Mode	Function	Data	Default value	Examples:
basic commands:						
B	0 .. 100 or ? or: -1 .. -100 or +1 .. +100 (relative mode)	set/get	Brightness (effective until power down) additionally ends strobe/flash mode, if active	Brightness in %	20	"B75" or "B 75" or "b75" or "B_75" -> set brightness to 75% "B?" or "B" or "b?" or "B ?" -> get current brightness value (returns "B75"<CR>) relative mode: "B+5" or "B +5" -> increase brightness value by 5% -> returns new brightness value ("B80"<CR>)
S	0, 1, 2 or ?	set/get	Shutter/Standby (effective until power down)	1 = Standby/Light Off 0 = Enable/Light On 2 = Toggle On/Off	0	"S1" -> turn off light output (standby mode) "S?" or "S" -> get Shutter status
L	0, 1 or ?	set/get	Panel Lock (effective until power down)	1 = Panel Locked 0 = Panel Unlocked	0	"L1" -> lock panel (user can no longer change brightness with controls at device until unlocked by: serial command, menu setting, or power down)
P	1 .. 10 or ?	set/get	Recall or Read Brightness Preset Number	preset number	0 (no preset active)	"P3" -> set brightness to preset 3 value (default: 40%) "P?" or "P" -> get currently active preset (or zero, if none) (returns "P3"<CR>)
maintenance commands:						
V	? only	get	Device Type and Version	ASCII String, max. 128 chars	"F3000 v2.00"	"V?" or "V" -> returns ASCII string with device name and version
R	0,1 or ?	set/get	Report Status	1 = Report Status On 0 = No Automatic Reports	1	"R0" -> turn off automatic status reports (until power down) "R?" or "R" -> get current reporting mode (returns "R0"<CR>") reports include: brightness and shutter change, presets, panel lock, and errors Note: commands are still echoed, but automatic transmission (on manual brightness change for example) is disabled
E	? only	get	Error State	ASCII String	"No Error"	"E?" or "E" -> returns "Light Guide"<CR> when no Light Guide is inserted "E?" or "E" -> returns "Temp."<CR> on LED overheat condition "E?" or "E" -> returns "No Error"<CR> when no errors are pending