

## SYNRAD Nomenclature 101

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# Nomenclature 101

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## Introduction/Background

Use this document to familiarize yourself with SYNRAD specific nomenclature, acronyms, and definitions.

- I. Purpose
- II. Scope
- III. Nomenclature
- IV. Acronyms
- V. Definitions

### I. Purpose

This laser nomenclature white paper outlines the rationale behind decoding your lasers model number, definitions for acronyms, and terms used throughout our documentation. For safety specific terms and definitions, please see our Laser Safety 101 white paper located on our website.

### II. Scope

We provide the cooling option letter in our laser model numbers: 'A' for air cooled, 'F' for fan cooled, 'W' for water cooled. Typical SYNRAD laser model numbers specify the laser family, then the power level, then the safety option, the cooling option and model revision level.

### III. General Nomenclature

The table below shows our general nomenclature. The tables that follow describe the codes in detail. The examples in the following figures show how the nomenclature is applied.

Standard Laser Model Format:		MMMM PPP X Y Z-Other						
Code Letters	Description	Model Series						
MMMM	Model Code	32-/48-	FSv	FSVi	FSTi	FSf	Fsi	PSp
PPP	Power Code (in Watts)	1	30	30	60	201	401	100
		2	40	40	80			150
		5			100			250
								400
X	Safety Code	S/K	S/K	S	S/K	S	S	S/E
Y	Cooling / Beam Diameter Code	A/F/W	A/F/W	A/W	A/F/W	blank	blank	blank/6/8
Z	Revision Letter	B through Z						
Other	Other Options	9.3/10.0/BE3/BE4/BE5/CL/HS						

**Table 1** Standard laser nomenclature format. ■ Indicates no further option/feature for this item exist at this time.

# Nomenclature 101 Whitepaper

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## III. Nomenclature (Codes Defined)

Model Codes	
Code	Model / Series Description
32--	32 Series
48--	48 Series
FSv-	Firestar v Series
FSVi	Firestar vi Series
FSTi	Firestar ti Series
FSf-	Firestar f201
FSi-	Firestar i401
PSP--	Pulstar p Series

Cooling/Beam Diameter Codes	
Code	Cooling & Beam Diameter Description
A	Air Cooled
F	Fan Cooled
W	Water Cooled
(blank)	No value indicates Water Cooled only
6	Water Cooled, 6 mm beam
8	Water Cooled, 8 mm beam

Revision Codes	
Code	Description
A-Z	Describes the laser revision

**MMMM** **PPP** **X** **Y** **Z** **Other**

Power Codes	
Code	Description
1--	5 W (32 Series) or 10 W (48 Series)
2--	25 W
5--	50 W
20-	20 W
30-	30 W
40-	40 W
60-	60 W
80-	80 W
100	100 W
150	150 W
200	200 W
250	250 W
400	400 W
401	401 W

Safety Codes	
Code	Safety Option Description
S	(S)-Standard OEM
K	Keypad
E	(E)-Electromagnetic Shutter

Other Options	
Code	Description
(blank)	10.6 μm Wavelength
9.3	9.3 μm Wavelength
10.2	10.2 μm Wavelength
BE3	External 3X Beam Expander
BE4	External 4X Beam Expander
BE5	External 5X Beam Expander
CL	Closed Loop Kit
HS	High Stability
(Other)	Specific Customer Options

**Table 2-7** Codes in detail.

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## III. Nomenclature (48 Series Example)

48-1SAN = 48 Series, 10 W, Standard (or OEM), Air cooled, Rev N laser.

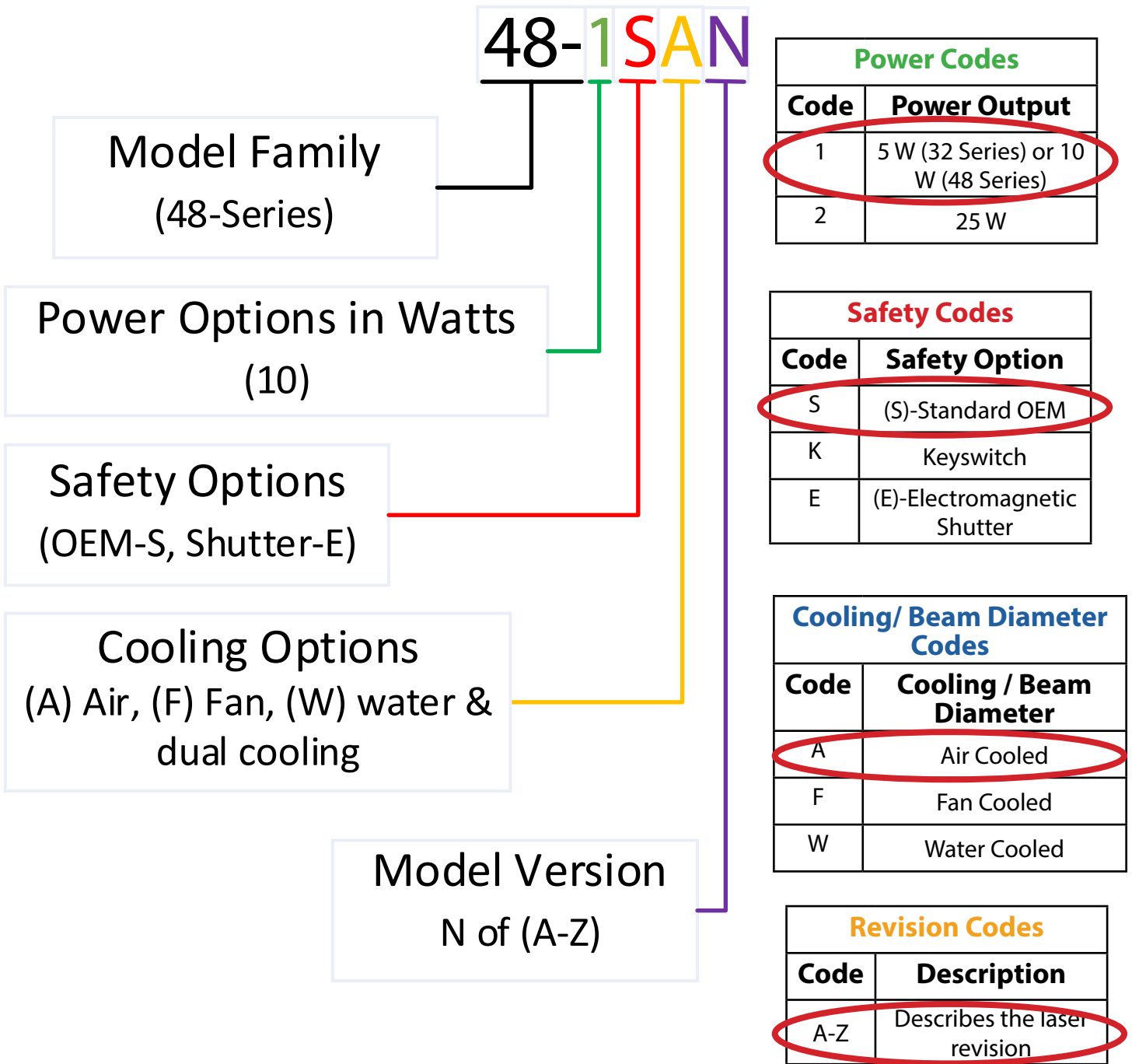


Figure 1 Anatomy of a model number example.

## III. Nomenclature (Firestar Example)

For instance, FSTi80KWC-10.2 = Ti Series, 80 W, Keyswitch, Water cooled\*, Rev C laser with a 10.2  $\mu\text{m}$  Wave-length option.

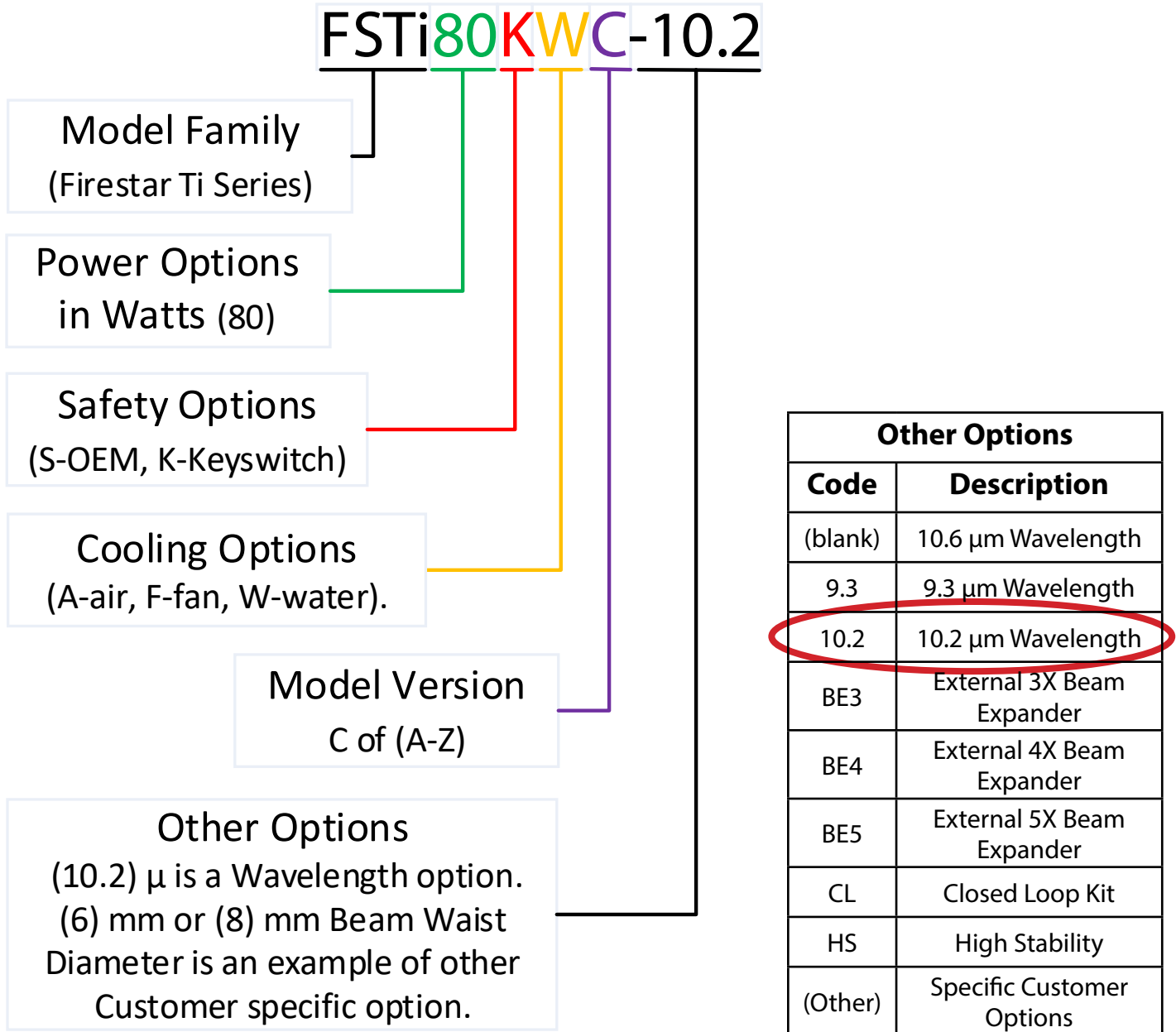


Figure 2 Model number decoding example.

## III. Nomenclature (Pulstar Example)

For instance, PSP400E8B = Pulstar Series, 400 W, Electromagnetic Shutter, 8 mm beam option, Water cooled\*, Rev B laser.

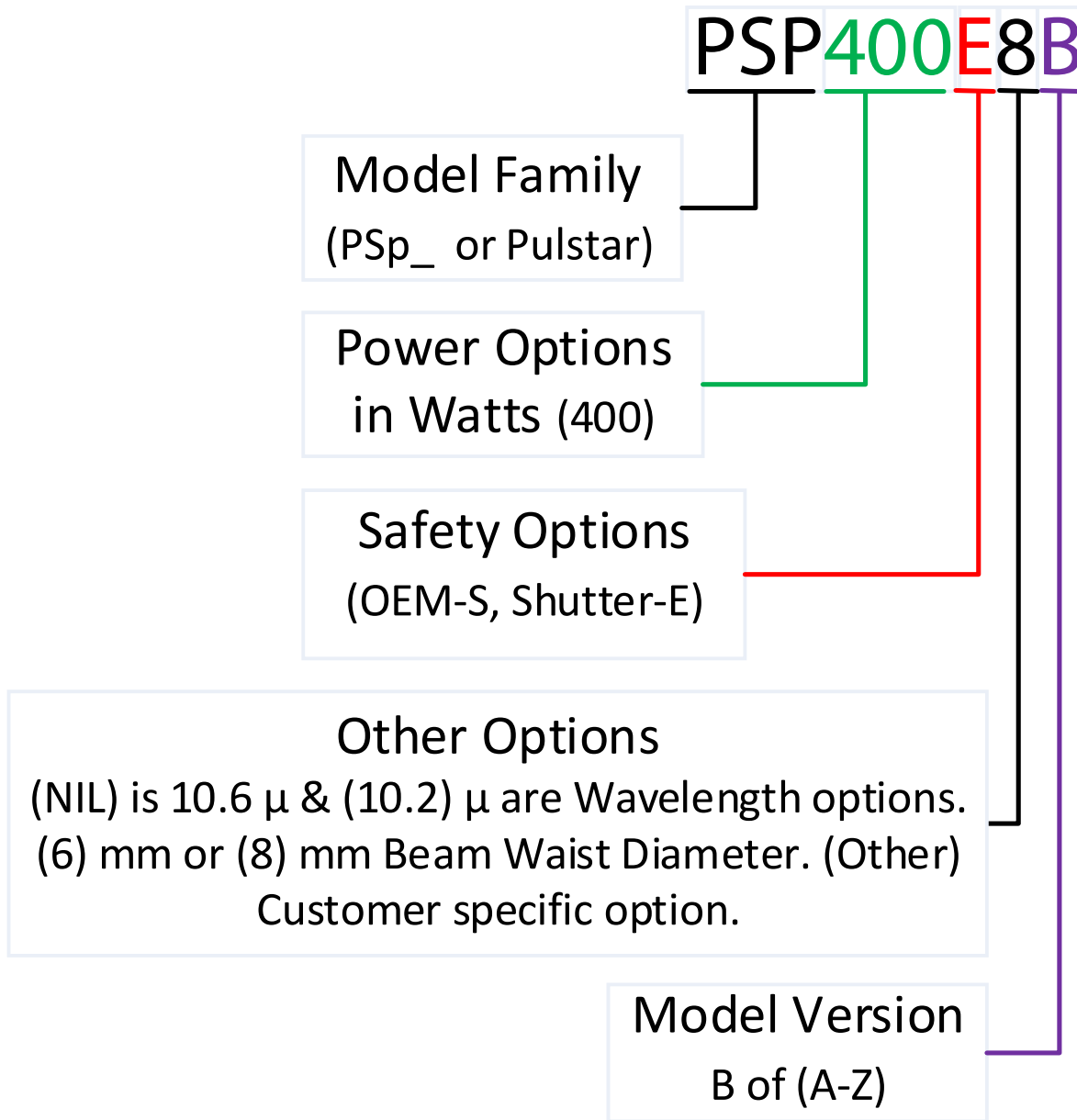


Figure 3 Model number decoding example.

**Note:** \*Our larger lasers only come as water cooled lasers, e.g. anything over 200 watts is an example, so the cooling letter may be dropped from the model number.

## IV. Acronyms

**CO<sub>2</sub>**- Carbon dioxide chemical formula.

**LASER**- Light Amplification Stimulated Electromagnetic Radiation.

**um or μm**- Micrometer.

## V. Definitions

**CO<sub>2</sub>**- Typically a colorless and odorless gas that consists of one atom of carbon covalently bonded to two atoms of oxygen.

**um or μm**- One meter is 1,000,000 micrometers.