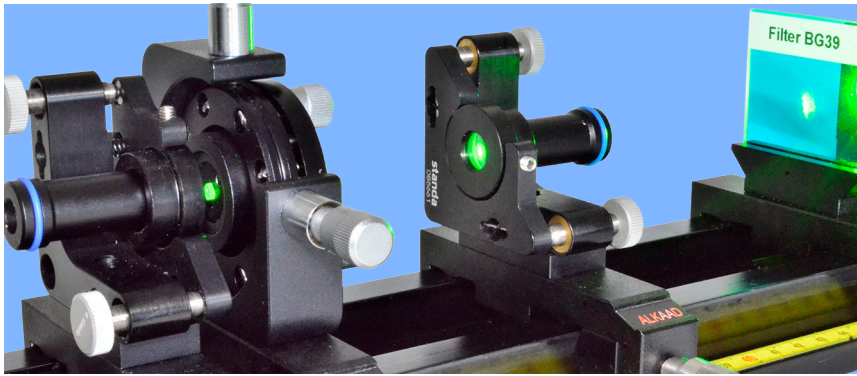


## LE-0710 “Green” 532 nm SHG extension

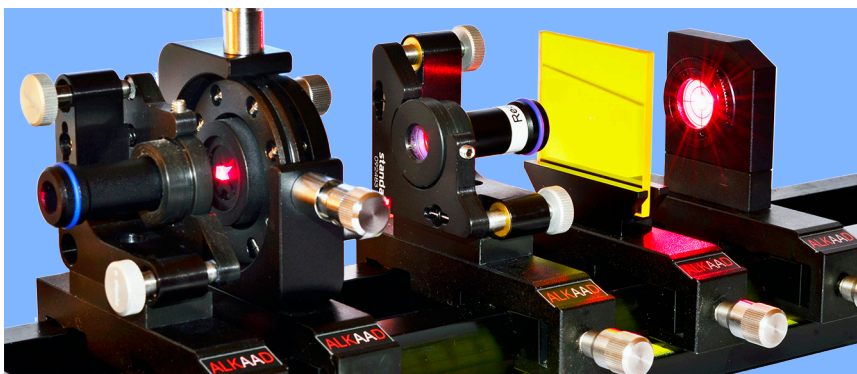


This extension comprises all necessary components to convert the “LE-0600 Diode pumped Nd:YAG Laser” into the “LE-0700 “Green” SHG with Diode pumped Nd:YAG Laser”. The main part is the KTP crystal (5) mounted into a 4 axes adjustment holder with a rotary mount allowing the KTP crystal to be rotated around its optical axis for best phase matching angle.

### LE-0710 “Green” 532 nm SHG extension consisting of:

Item	Code	Qty.	Description	Details page
1	MM-0110	1	Translucent screen on carrier MG20	94 (10)
2	OC-0005	1	Biconcave lens f=-5 mm, C25 mount	98 (1)
3	OC-0400	1	Adjustable iris mounted in C25	100 (19)
4	OC-0939	1	Filter BG39, 50 x 50 x 3 mm	104 (53)
5	OM-0650	1	KTP crystal SHG 532 nm, 5 axes mount on carrier MG20	115 (34)

## LE-0720 “Red 660 nm” SHG Extension



This extension comprises all necessary components to operate the “LE-0600 Diode pumped Nd:YAG Laser” at 1330 nm instead of 1064 nm. For this purpose the provided Nd:YAG rod (1) and the cavity mirror (4) are coated for this wavelength. A KTP crystal (2) is provided to double the frequency of the fundamental wave of 1330 nm resulting in a red radiation. With the spectrometer (CA-0270) the spectrum of the visible red radiation is recorded and it shows three different lines (see Fig. 2.57). From this we can conclude that the Nd:YAG laser oscillates simultaneously on three lines 1318.8 1327.0 and 1337,6 nm. The Fig. 2.56 shows the relevant energy level diagram for the 1064 nm (532 nm) and the transition  ${}^4F_{3/2} \rightarrow {}^4I_{13/2}$  for the 1330 nm manifold.

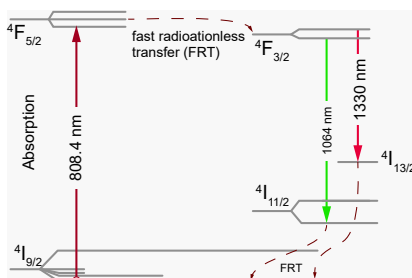


Fig. 2.56: The 1330 nm laser transition

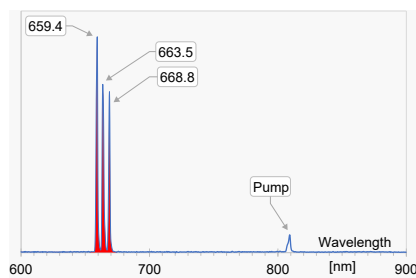


Fig. 2.57: Red SHG lines

### LE-0720 “Red 660 nm” SHG Extension consisting of:

Item	Code	Qty.	Description	Details page
1	OC-0860	1	Nd:YAG rod 1.3 $\mu$ m coating, M16 mount	103 (48)
2	OC-0870	1	“Red 660 nm” SHG crystal mounted KTP in mount	103 (49)
3	OC-0910	1	Filter KG5, 50 x 50 x 3 mm	103 (51)
4	OC-1080	1	Laser mirror M16, ROC 100 mm, HR @ 1300 nm	105 (67)