

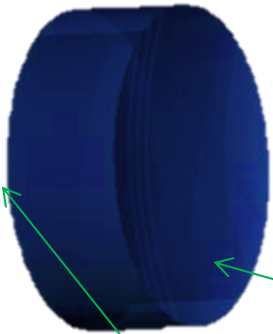
# Cavity enhanced SHG

Leonardi Matteo

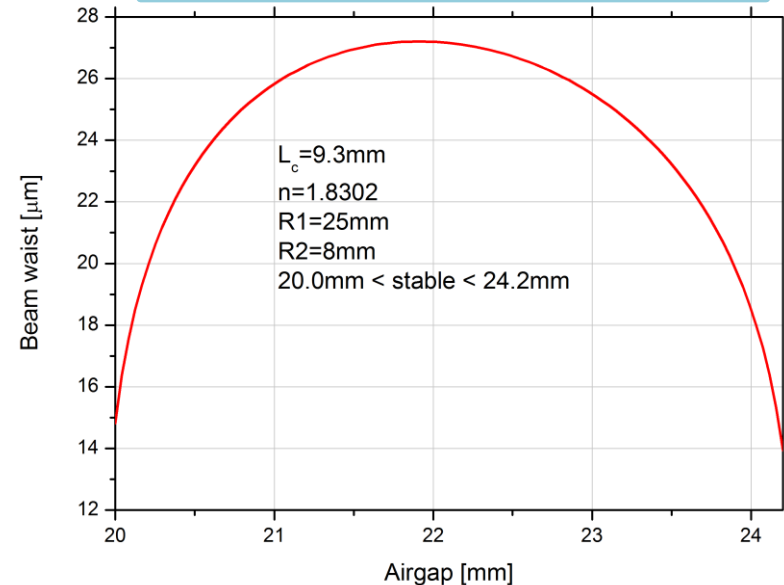
# Optical Design

Flat surface  
 $R@1064\text{nm} < 0.1\%$   
 $R@532\text{nm} < 0.2\%$

$\text{RoC} = -8\text{mm}$   
 $R@(1064\text{nm}\&532\text{nm}) > 99.975\%$



PPKTP  
1.00mm x 1.50mm x 9.30mm



$\text{RoC} = 20\text{mm}$   
 $R@1064\text{nm} < 0.1\%$   
 $R@532\text{nm} < 0.2\%$

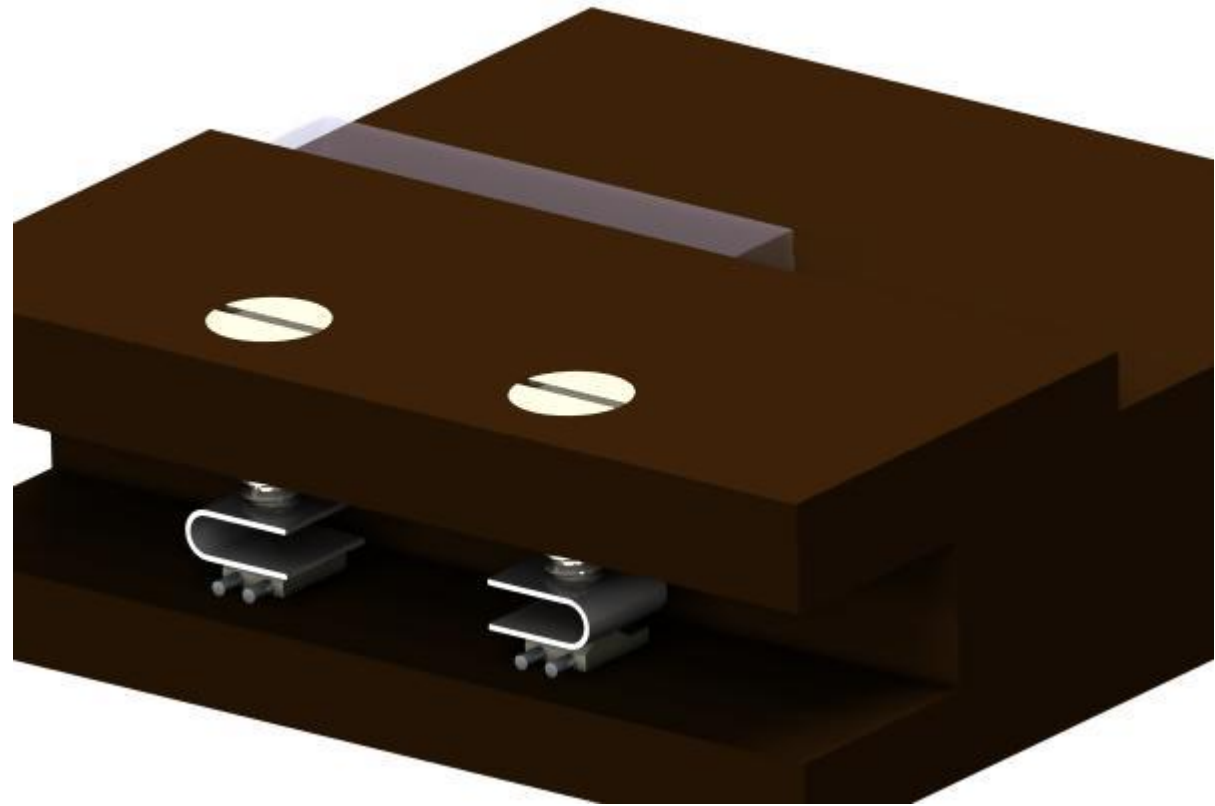
$\text{RoC} = 25\text{mm}$   
 $R@1064\text{nm} = 96\%$   
 $R@532\text{nm} < 2\%$

# Temperature control (I)

Conductive pasta could be a problem



Completely DRY assembly

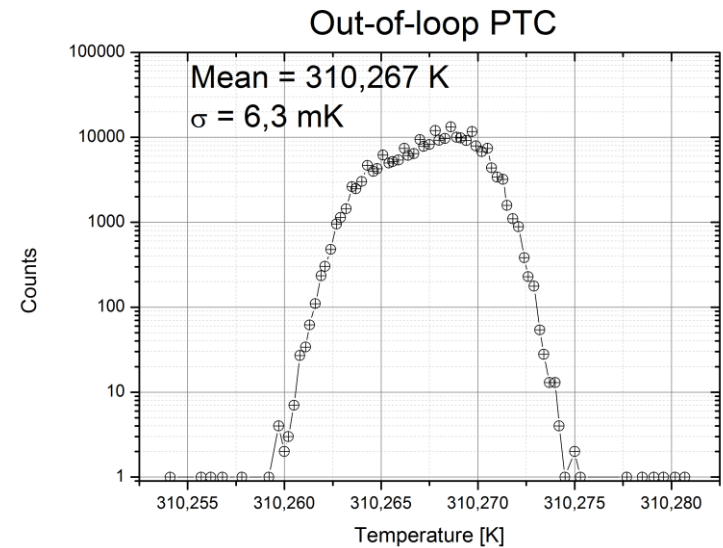
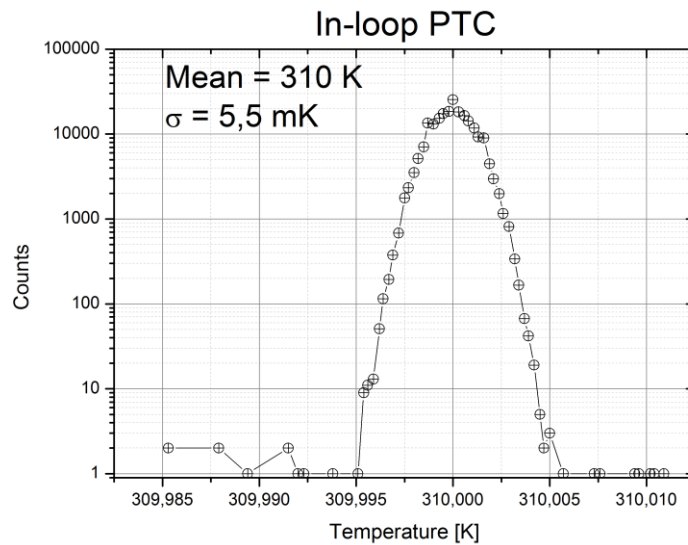


# Temperature control (II)

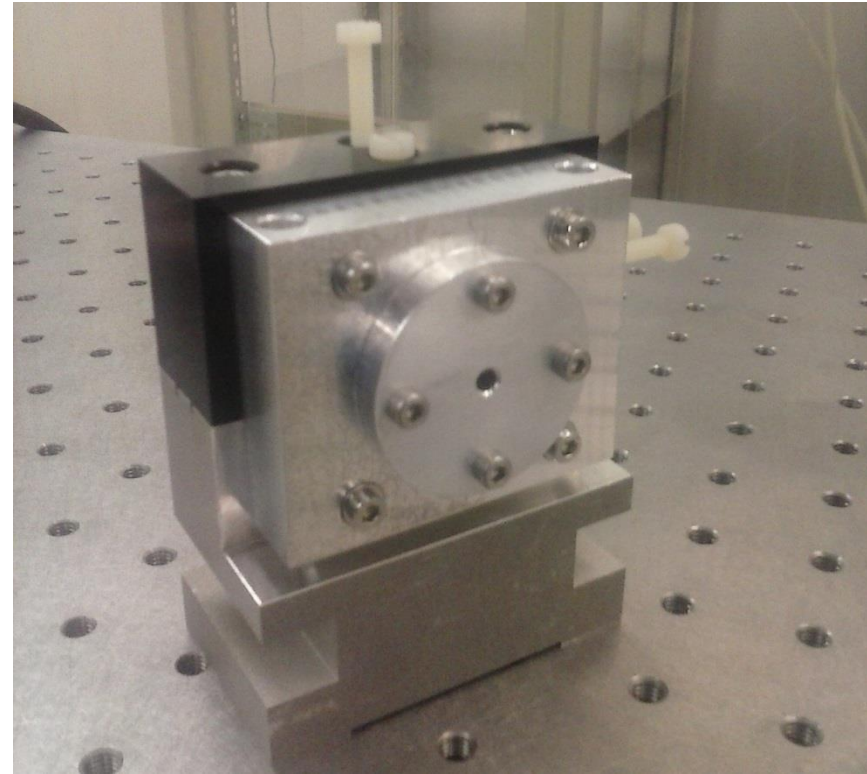
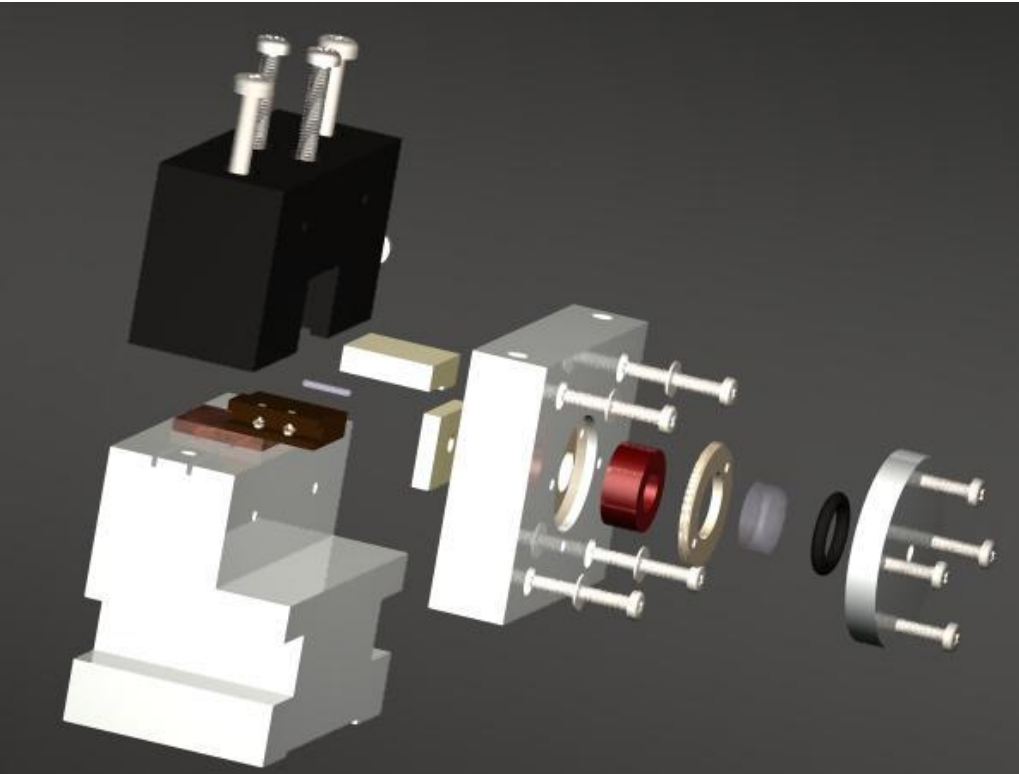
Temperature control is performed via a digital PID (actually only PI)



Preliminary results: 3 days of acquisition with the dry assembly



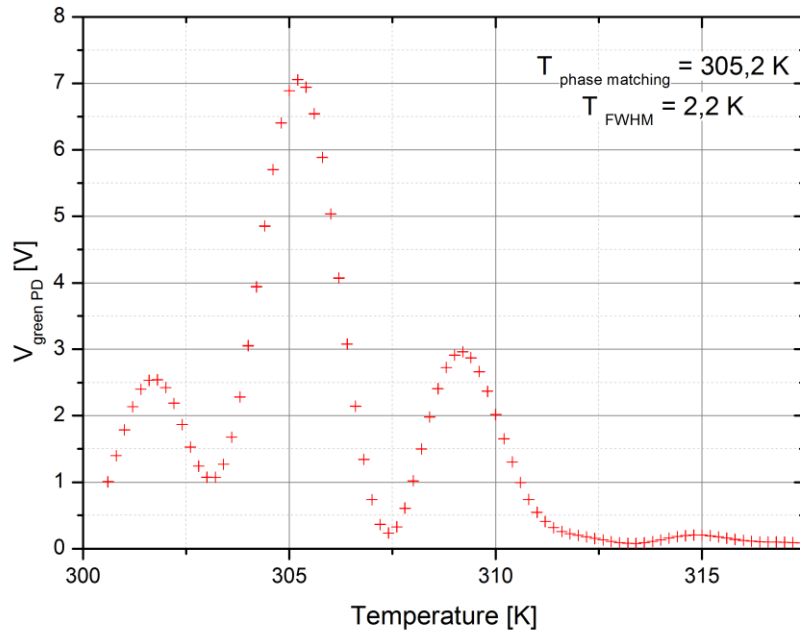
# Mechanics



Dimensions: 70.00mm x 48.80mm x 89.00mm

# IR to GREEN

Preliminary results (double pass)



Phase Matching curve (QPM)

