

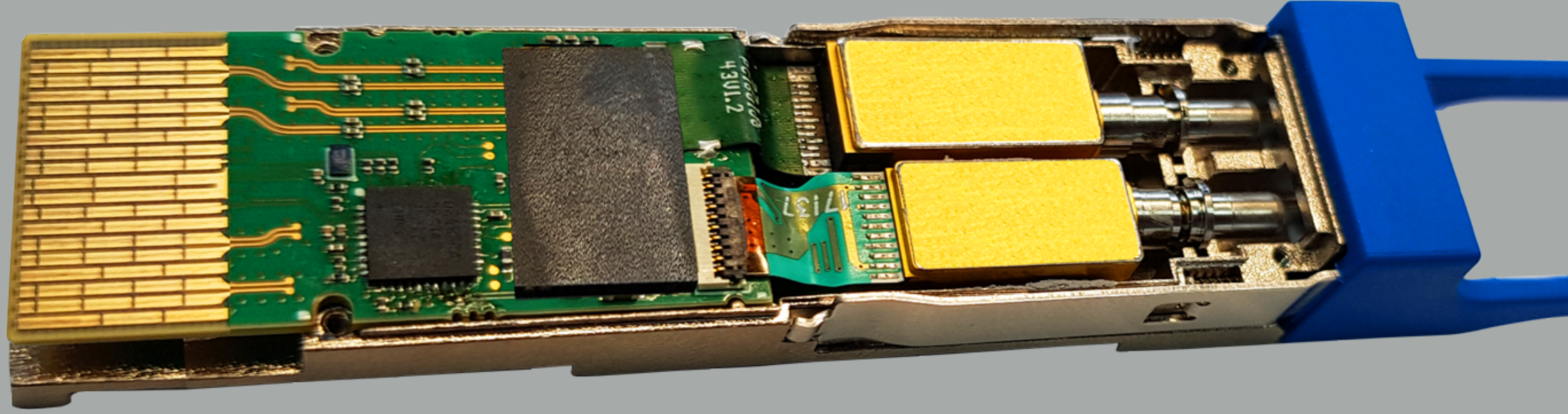
the complexity of  
hyper speed  
transceivers



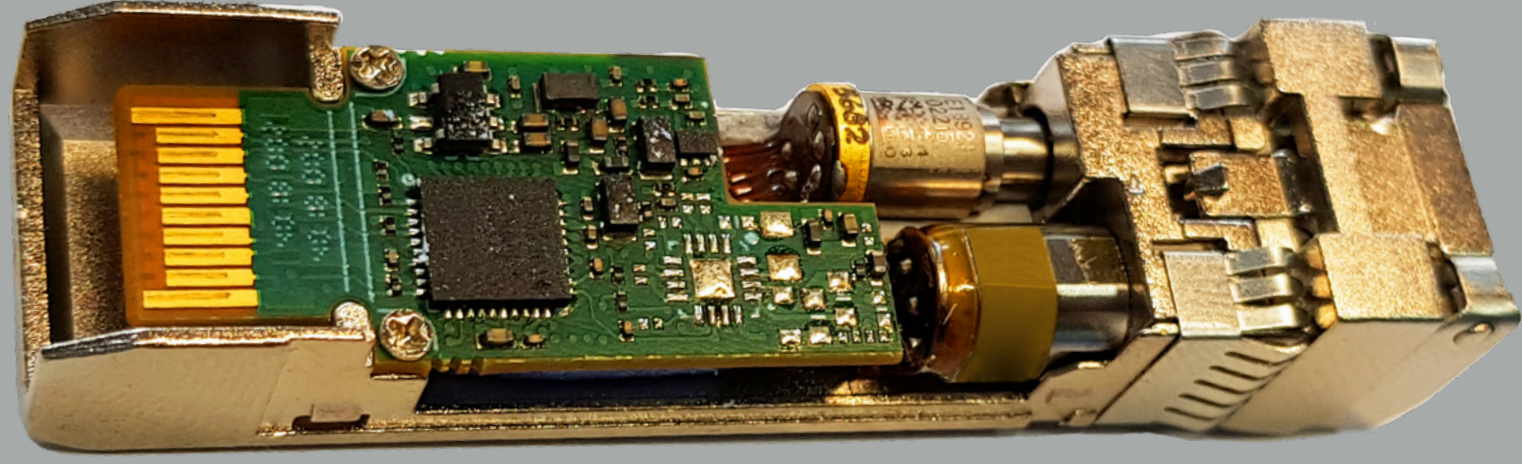
lets make it



[400G]



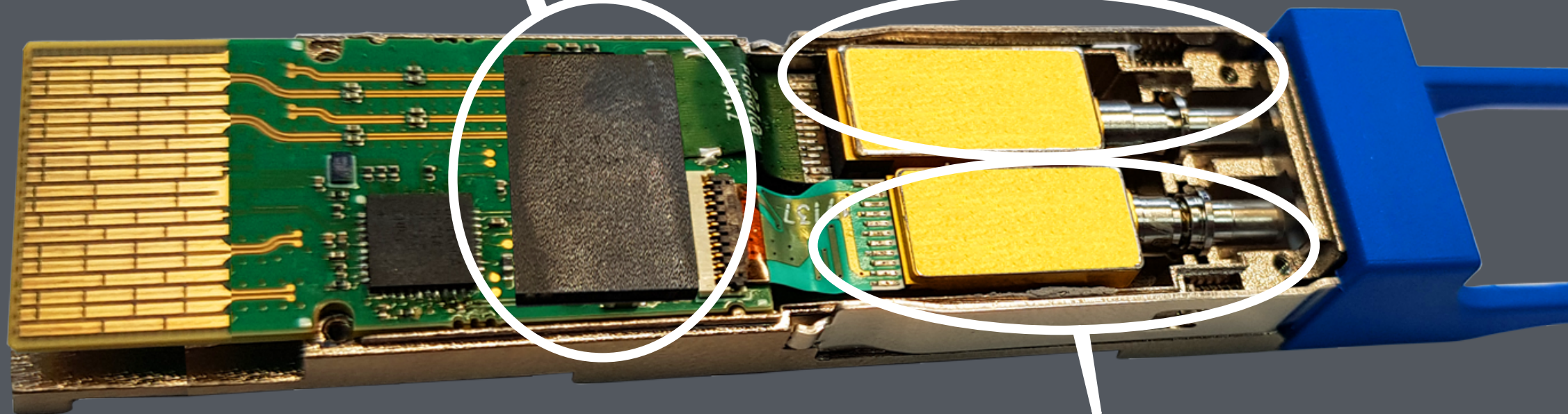
[10G]





# DigitalSignalProcessor

TRANSmitter



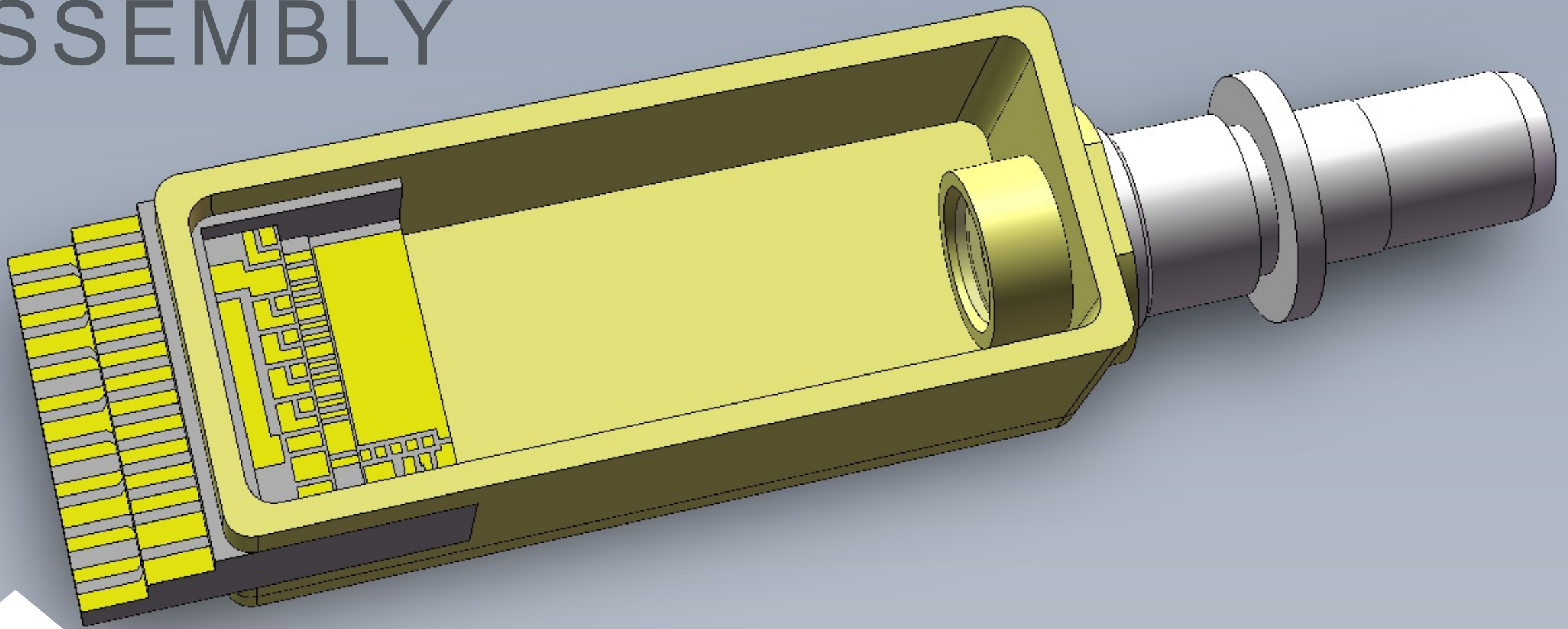
reCEIVER



**TRANSMITTER**



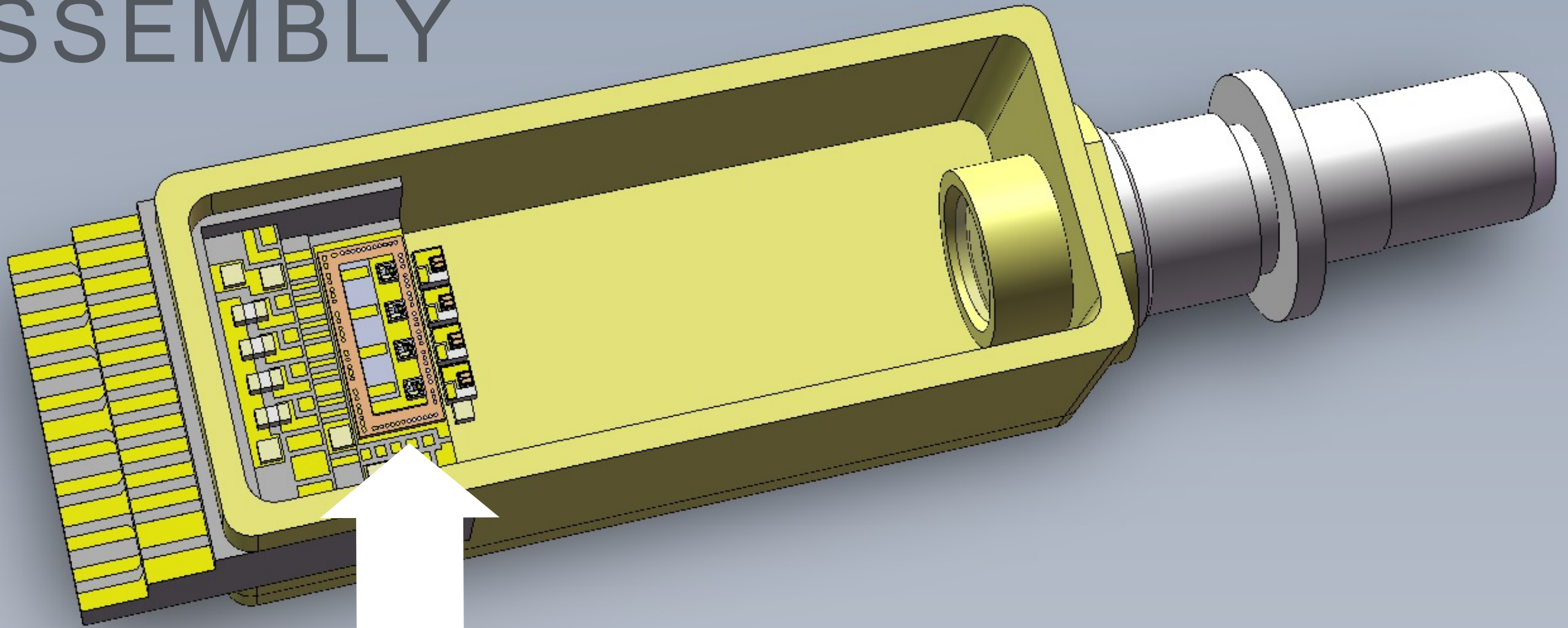
TRANSMITTER  
OPTICAL  
SUB  
ASSEMBLY



**electrical connector**



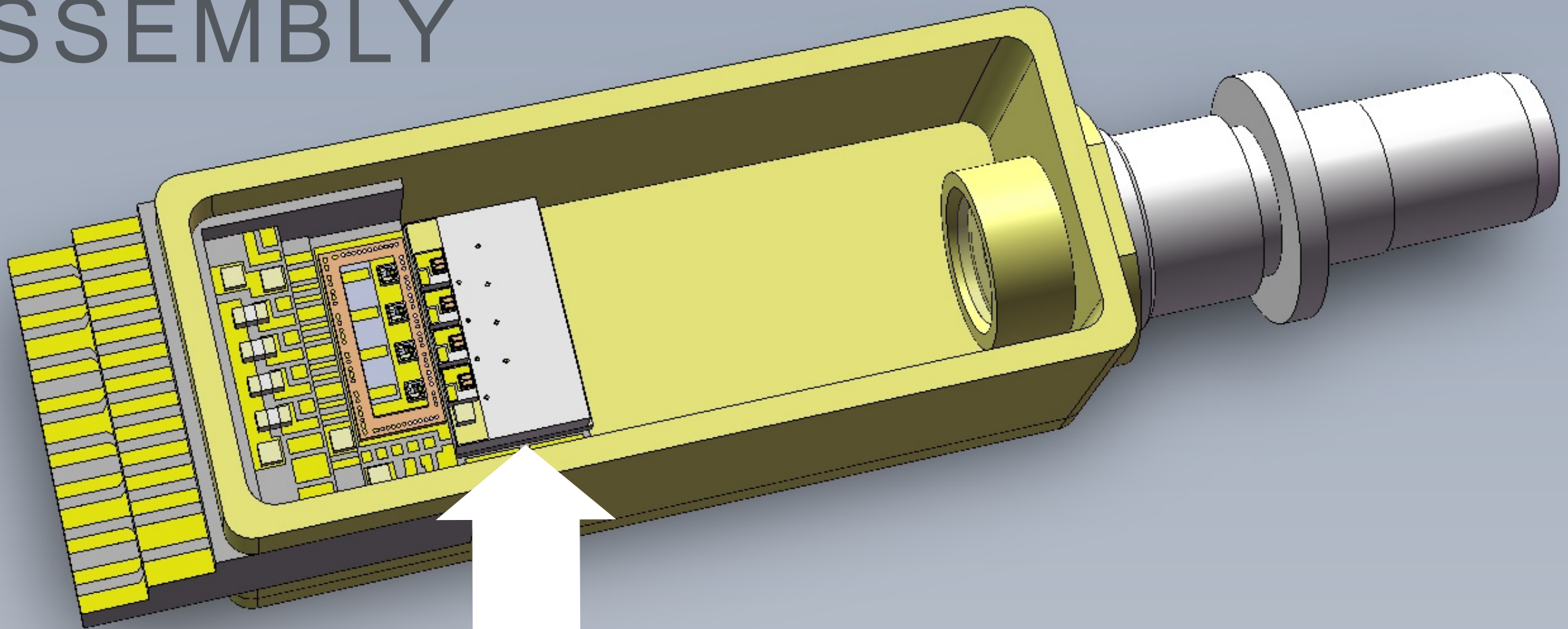
# TRANSMITTER OPTICAL SUB ASSEMBLY



**laser diodes**



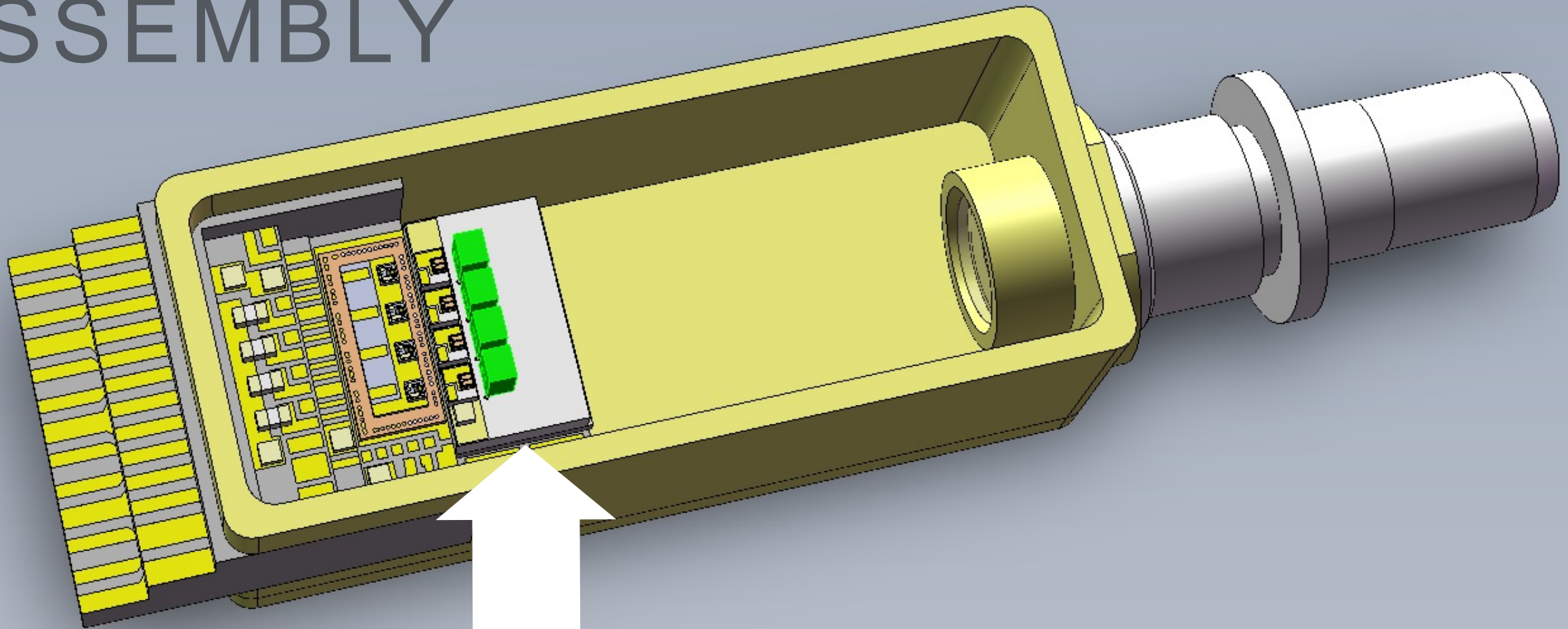
# TRANSMITTER OPTICAL SUB ASSEMBLY



**cooler**



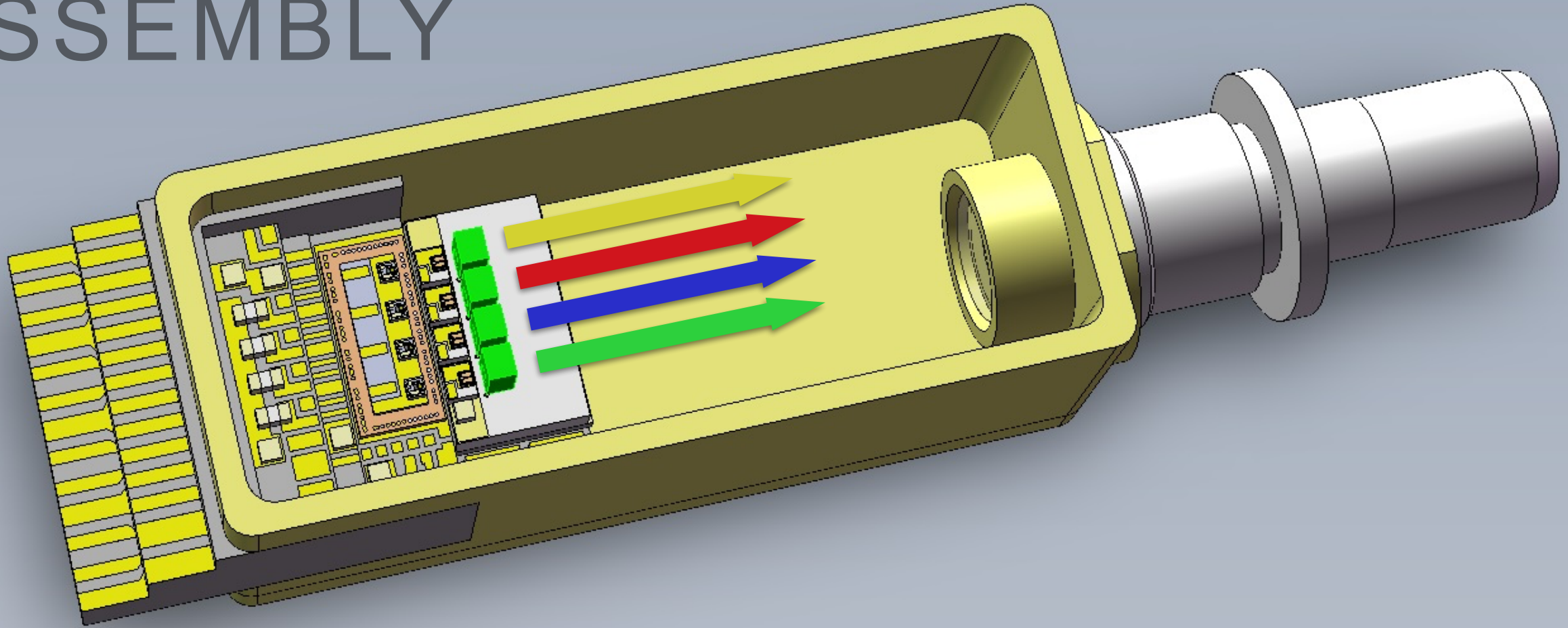
# TRANSMITTER OPTICAL SUB ASSEMBLY



**optical lenses**

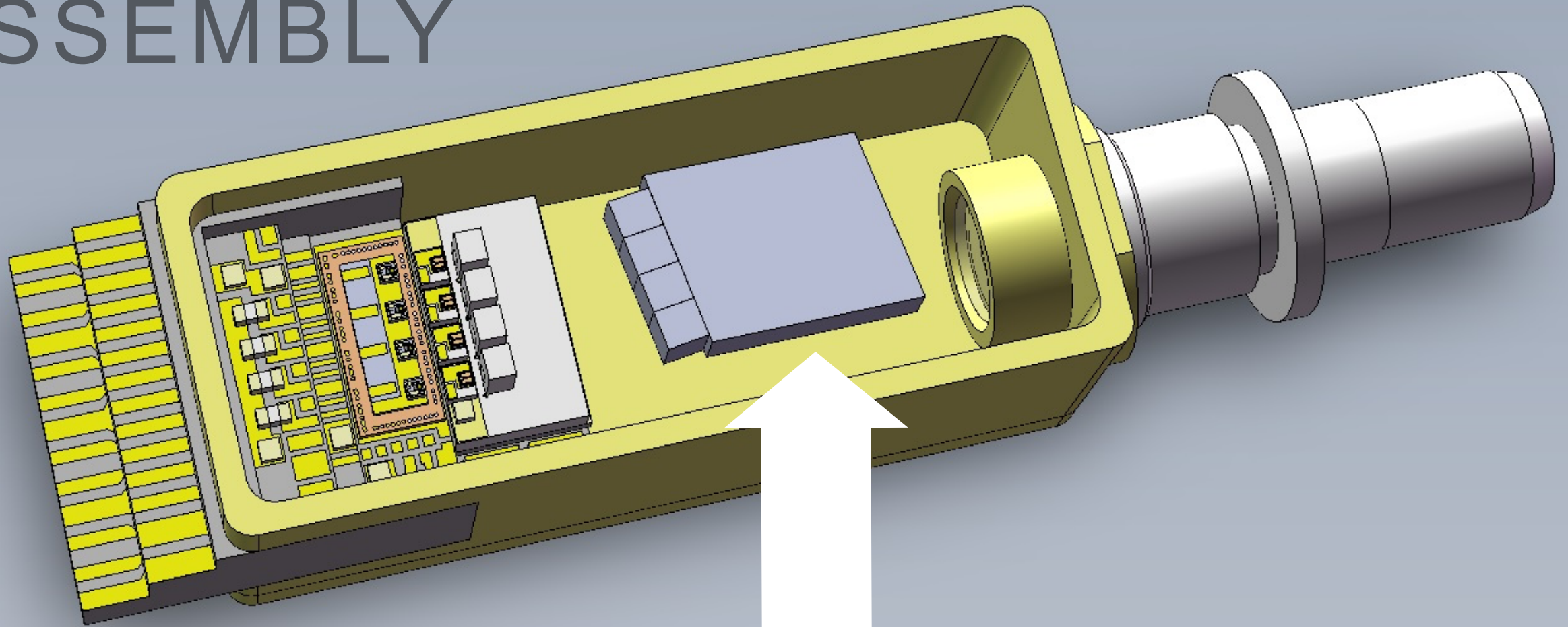


# TRANSMITTER OPTICAL SUB ASSEMBLY





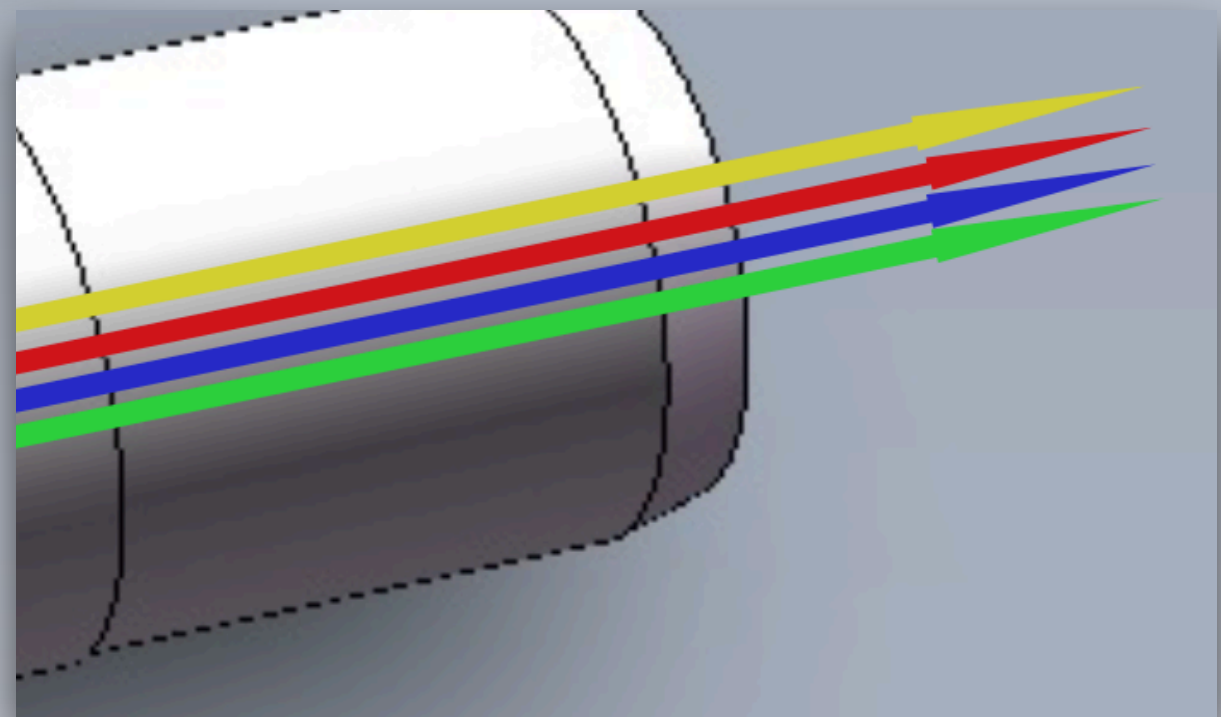
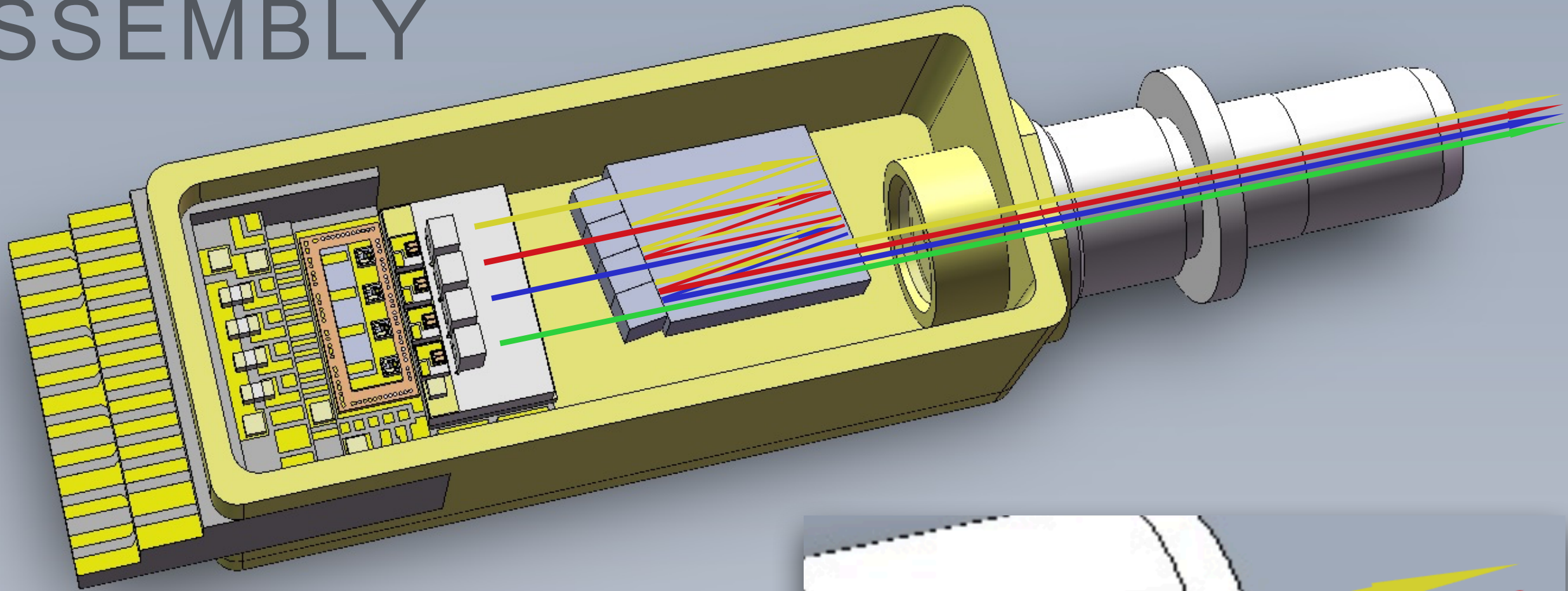
# TRANSMITTER OPTICAL SUB ASSEMBLY



**optical multiplexer**



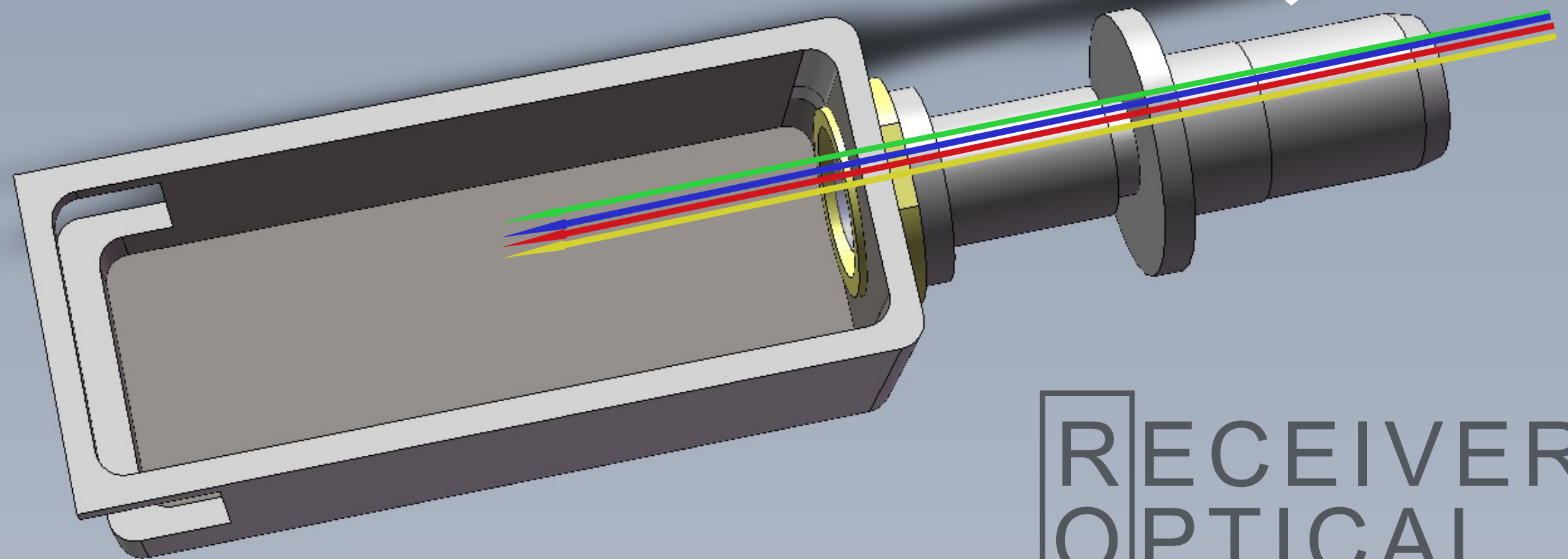
# TRANSMITTER OPTICAL SUB ASSEMBLY



**RECEIVER**

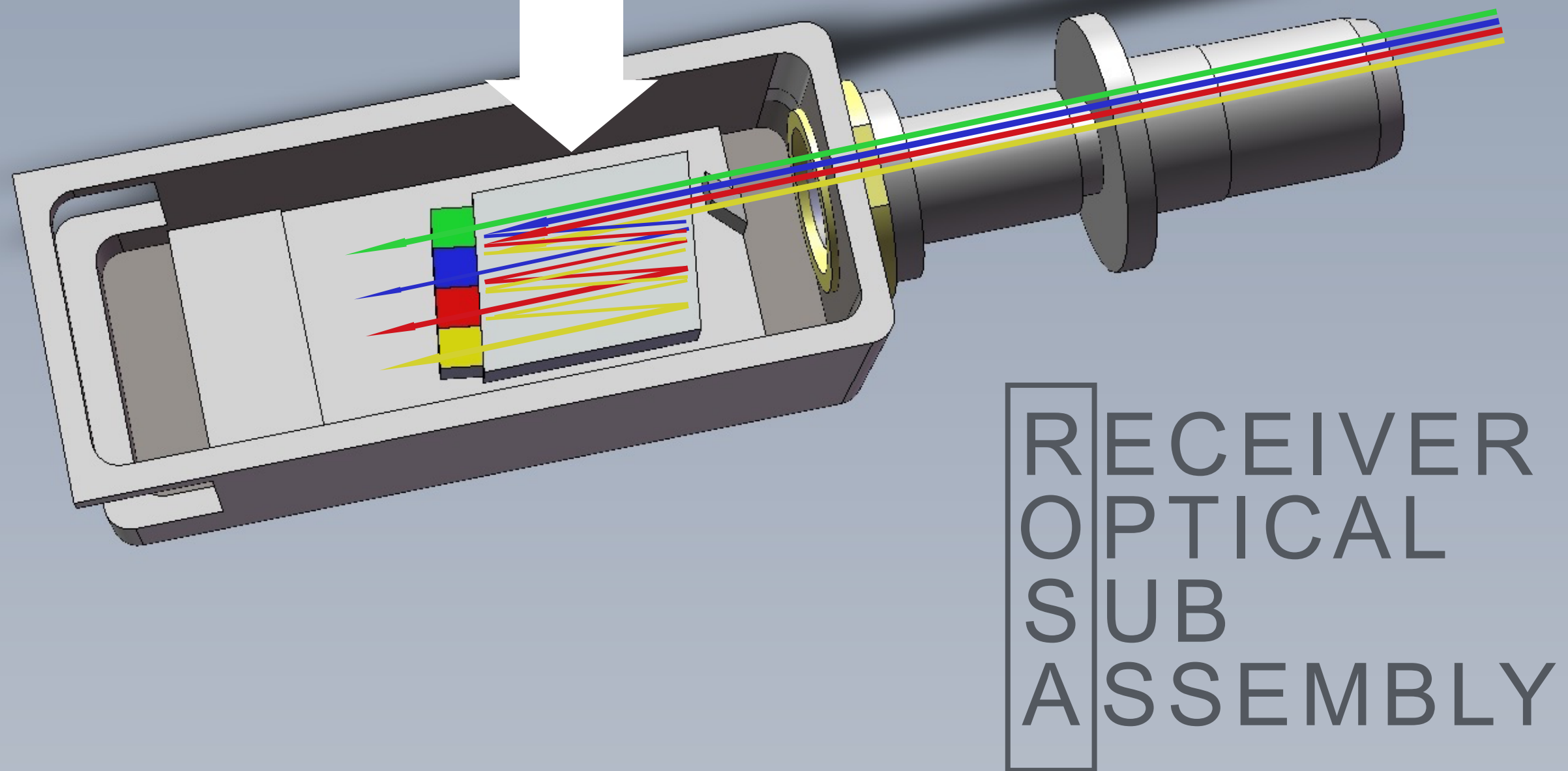


# optical receptacle



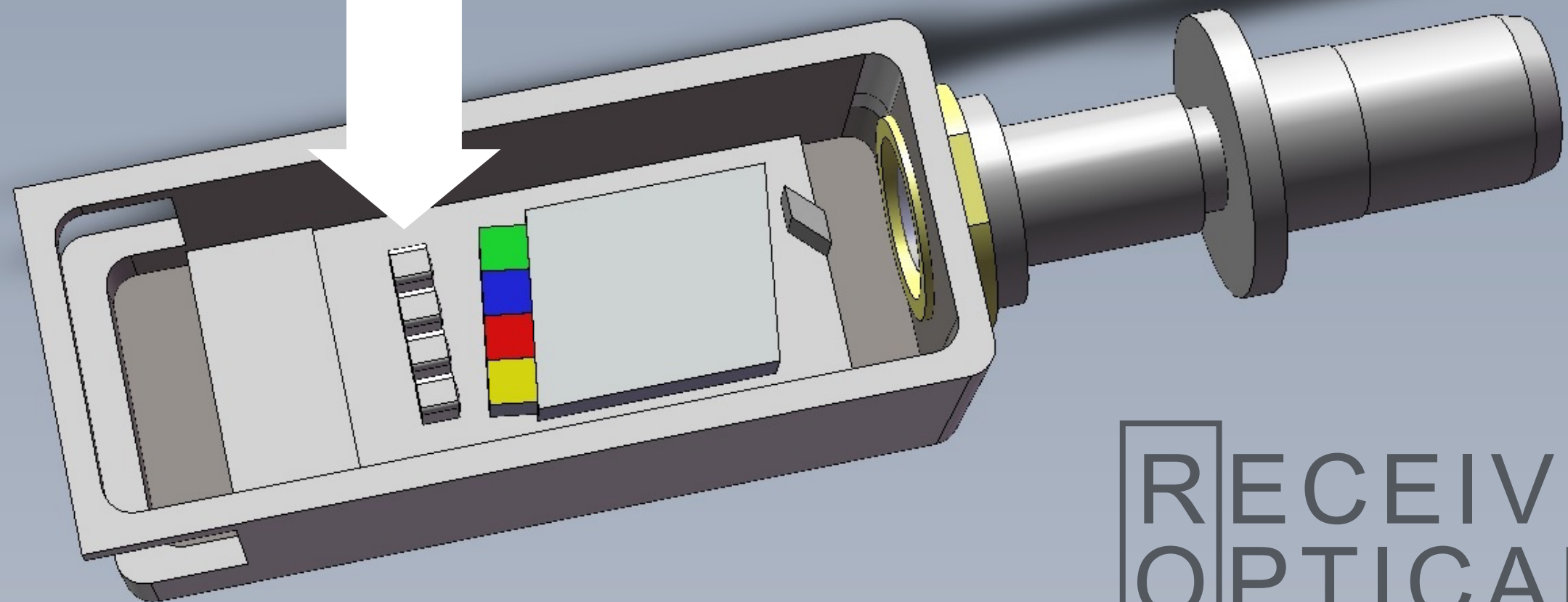
RECEIVER  
OPTICAL  
SUB  
ASSEMBLY

# optical demultiplexer



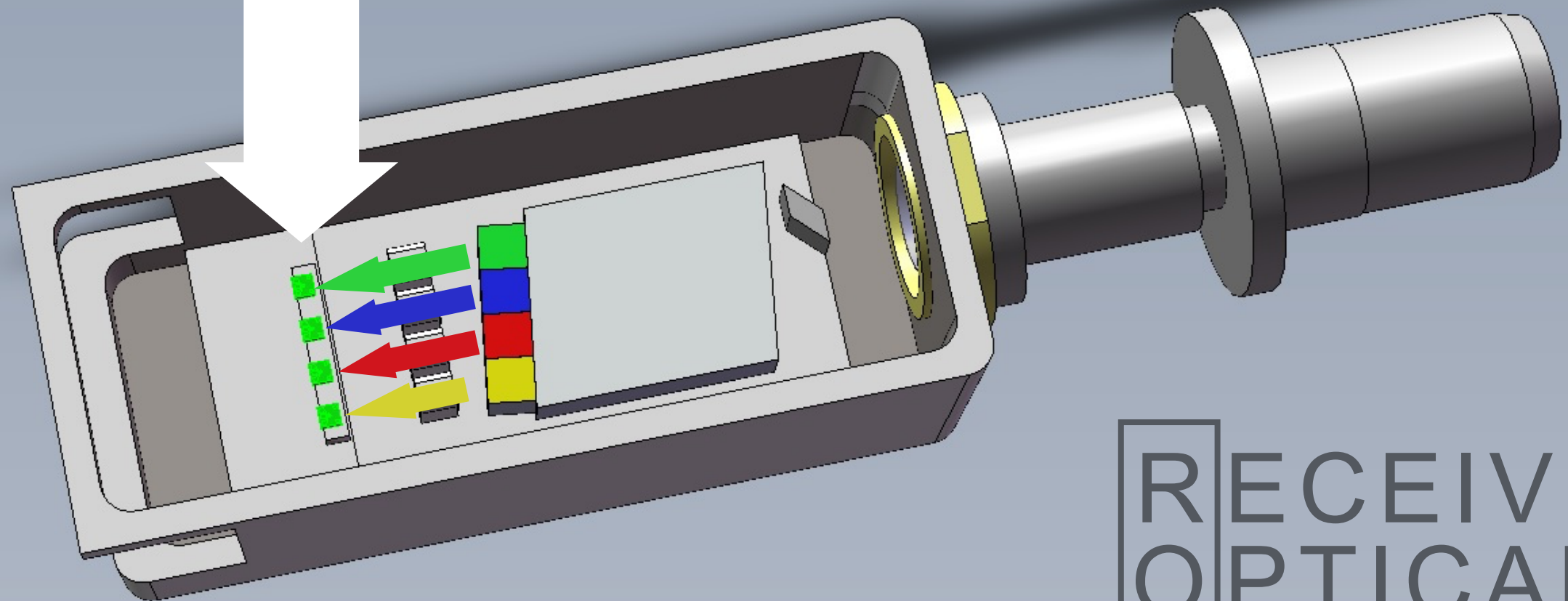


# optical lenses



RECEIVER  
OPTICAL  
SUB  
ASSEMBLY

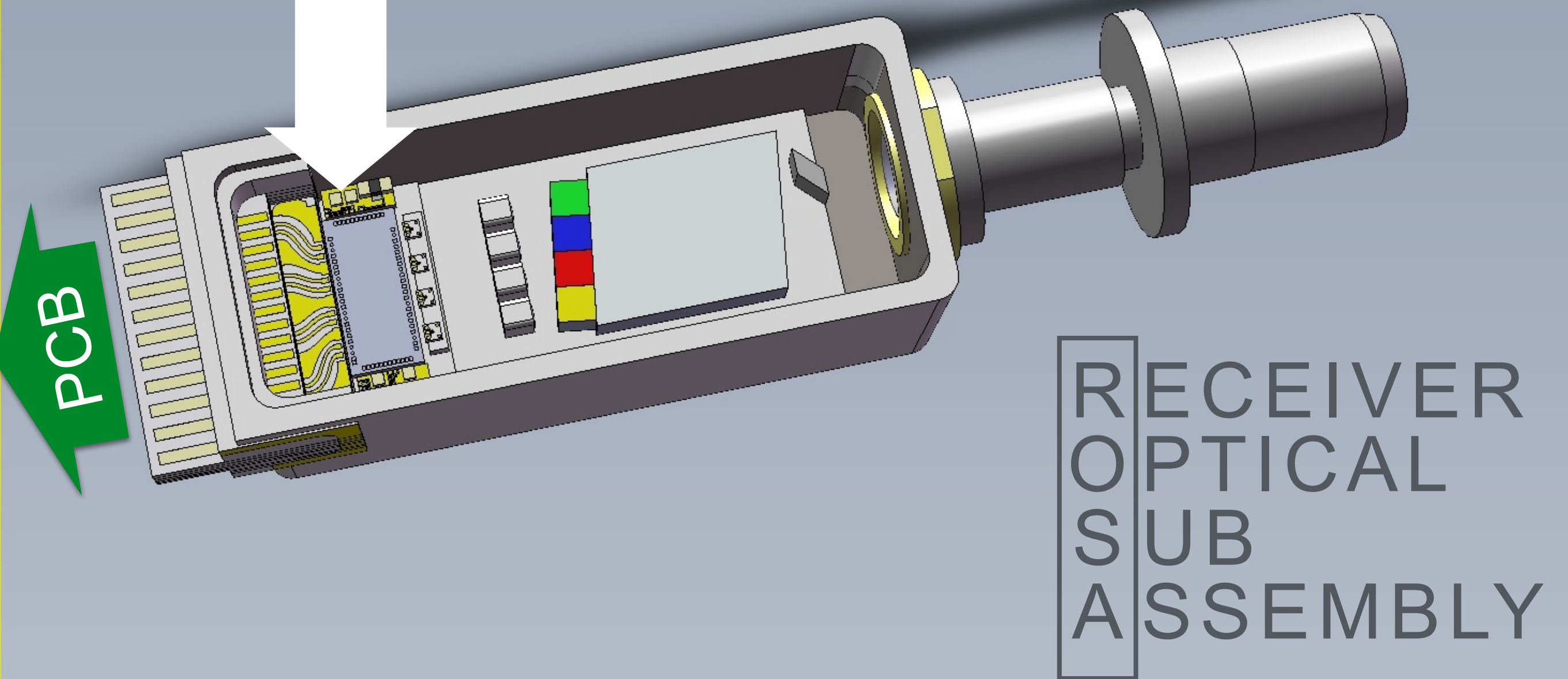
# PIN diode



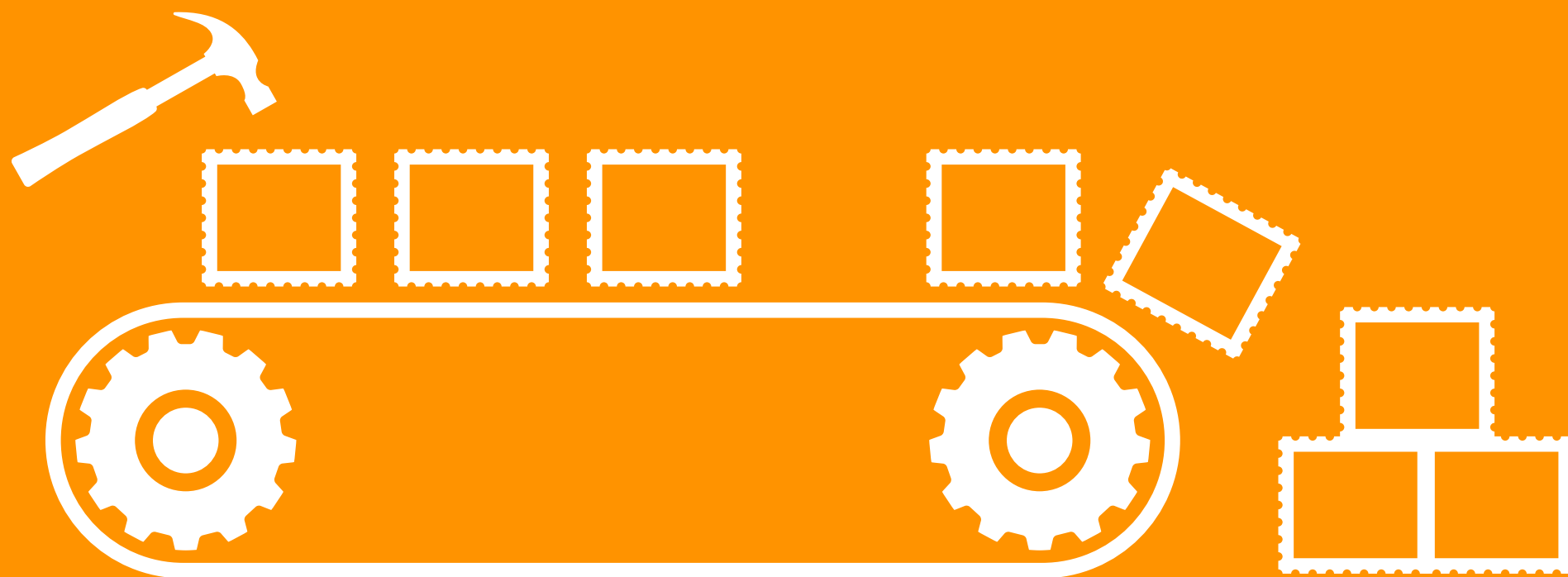
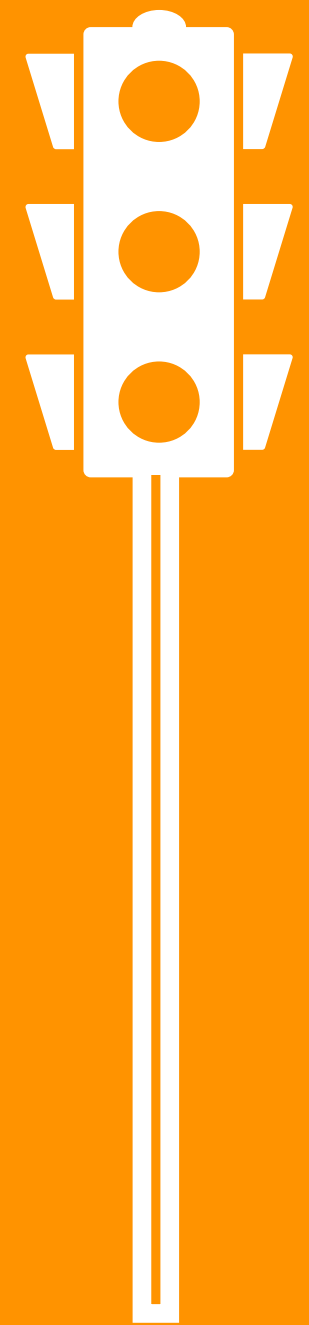
RECEIVER  
OPTICAL  
SUB  
ASSEMBLY



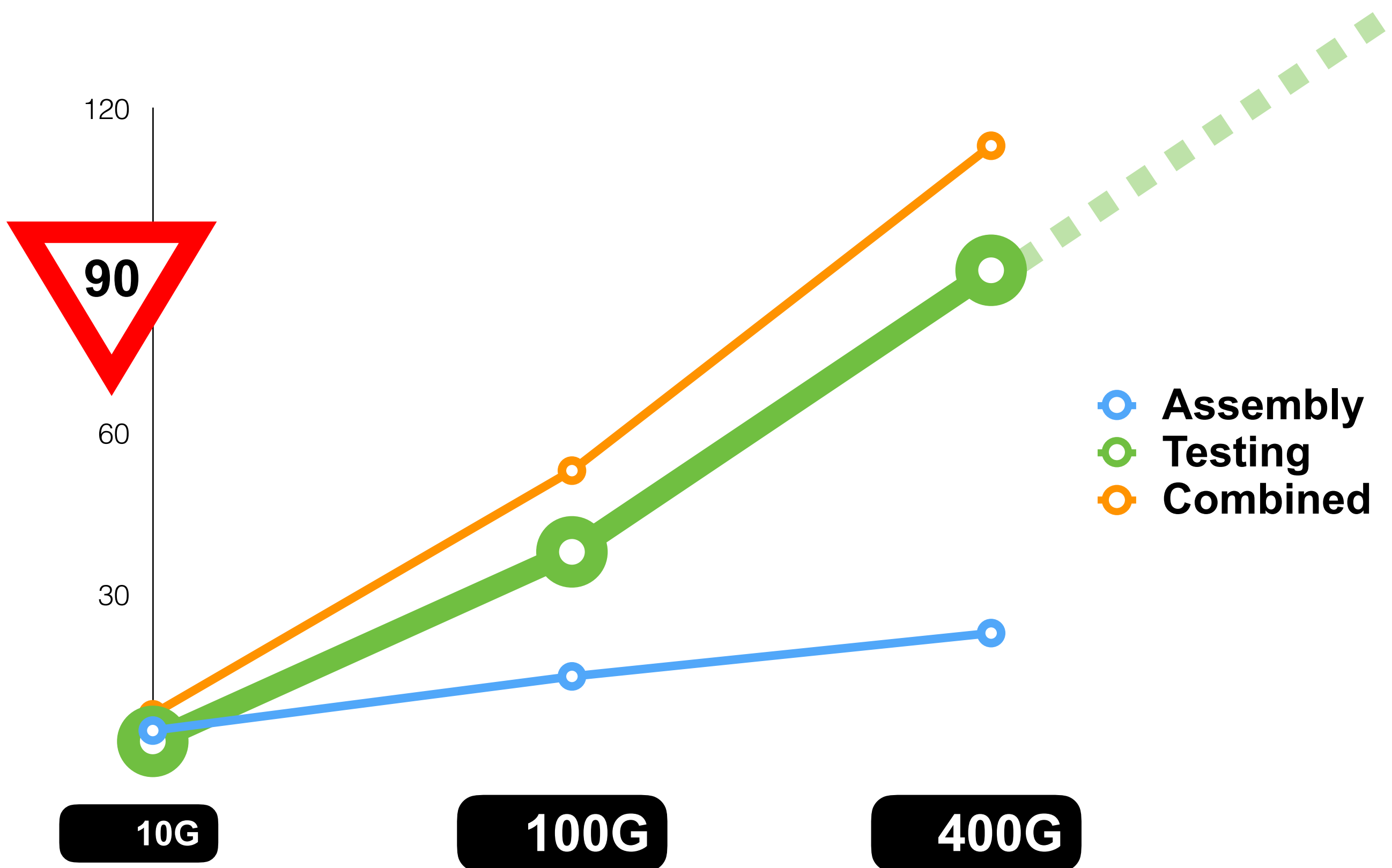
# amplifier



# production







**T I M I N G**



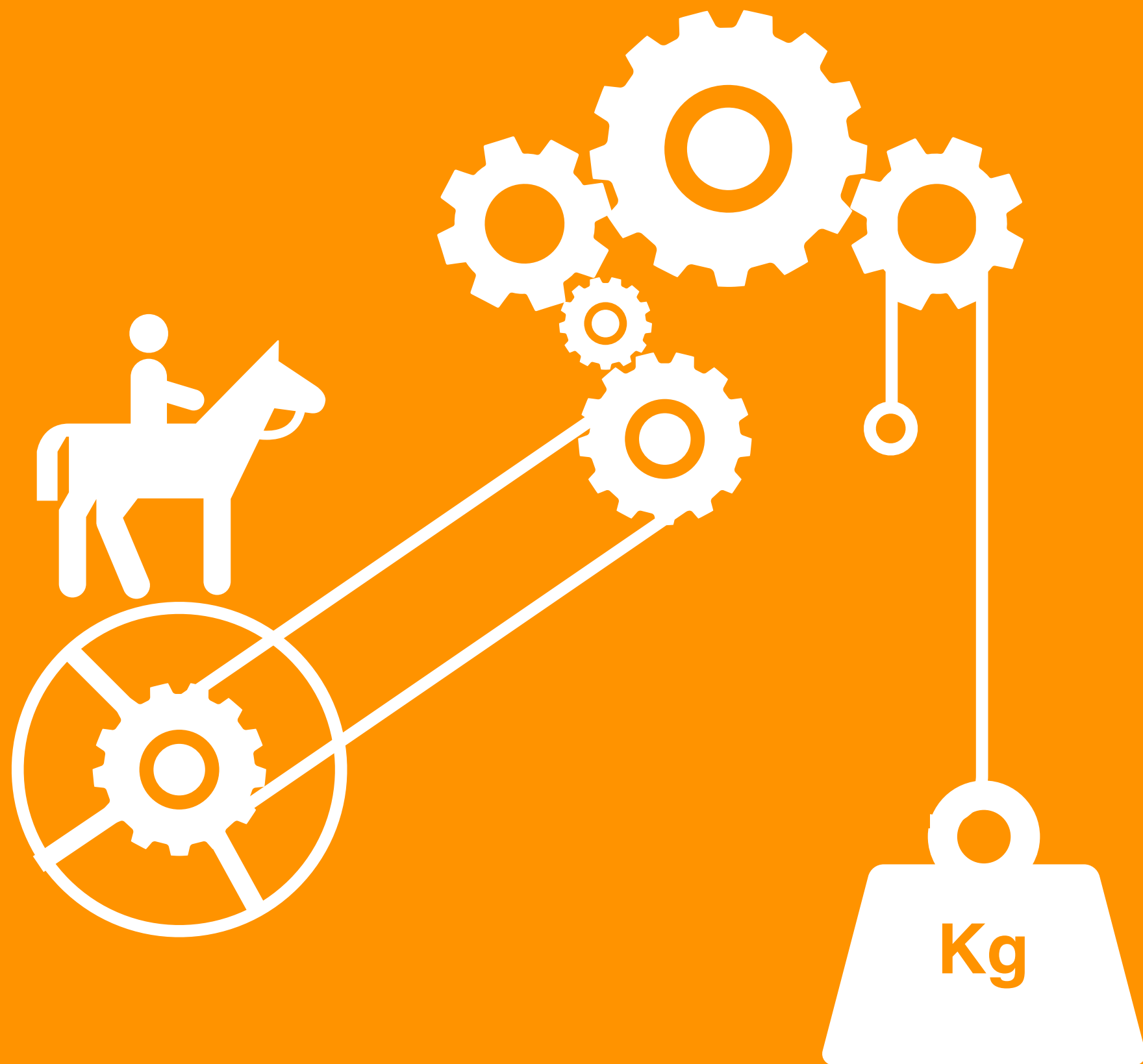
0°C

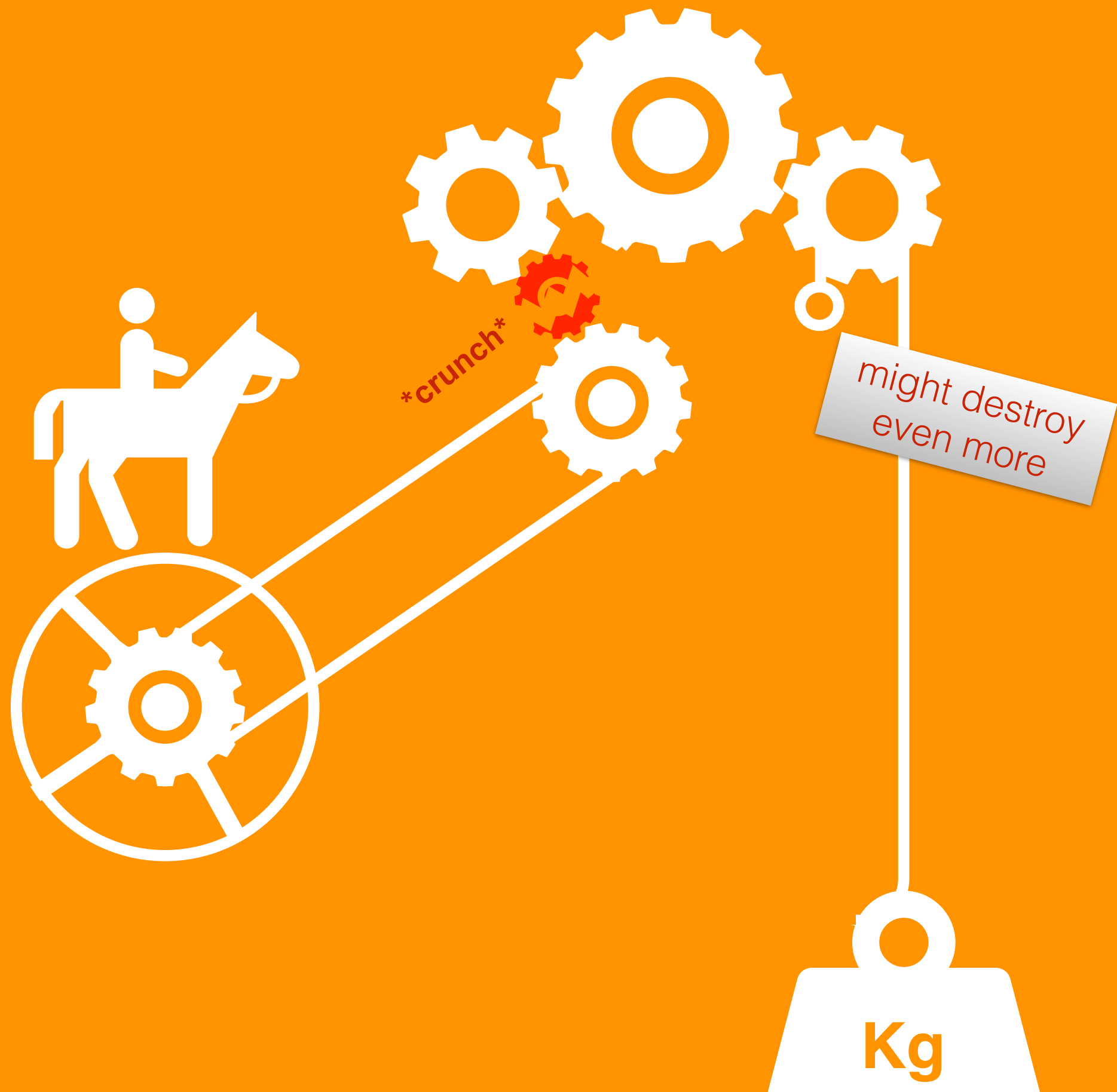


+70°C

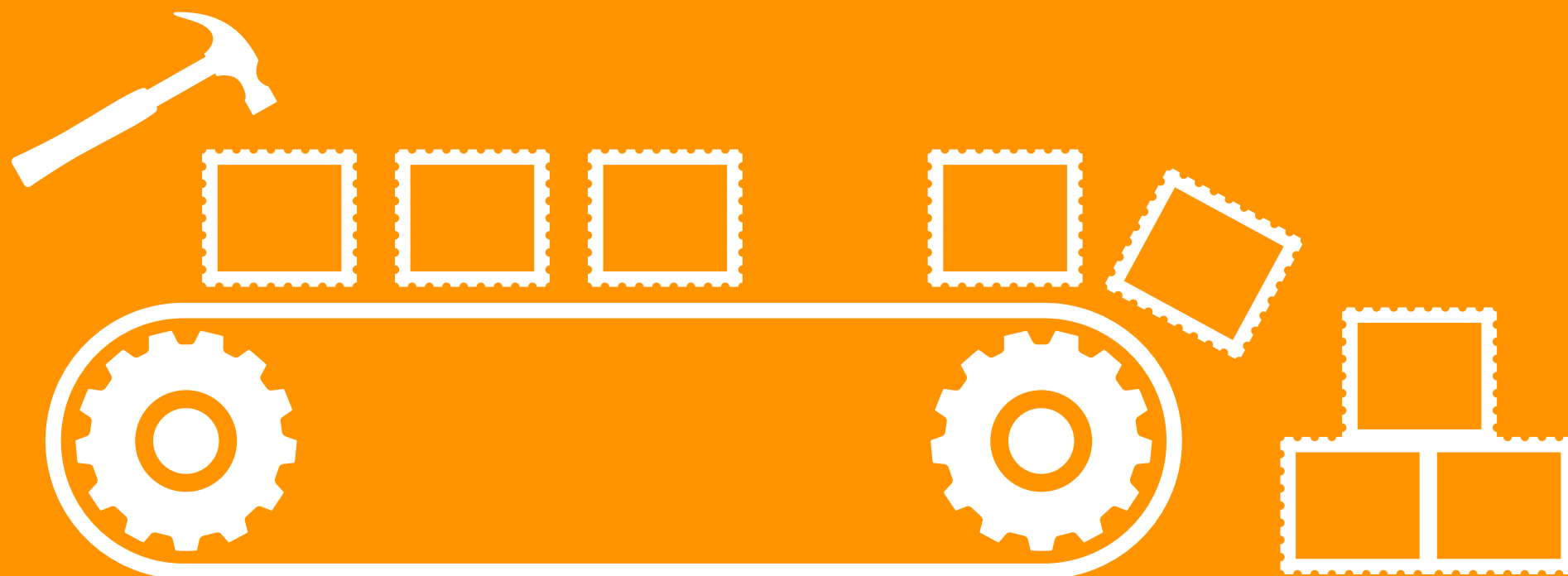
TEMPERATURE







# production





# Forward Error Correction



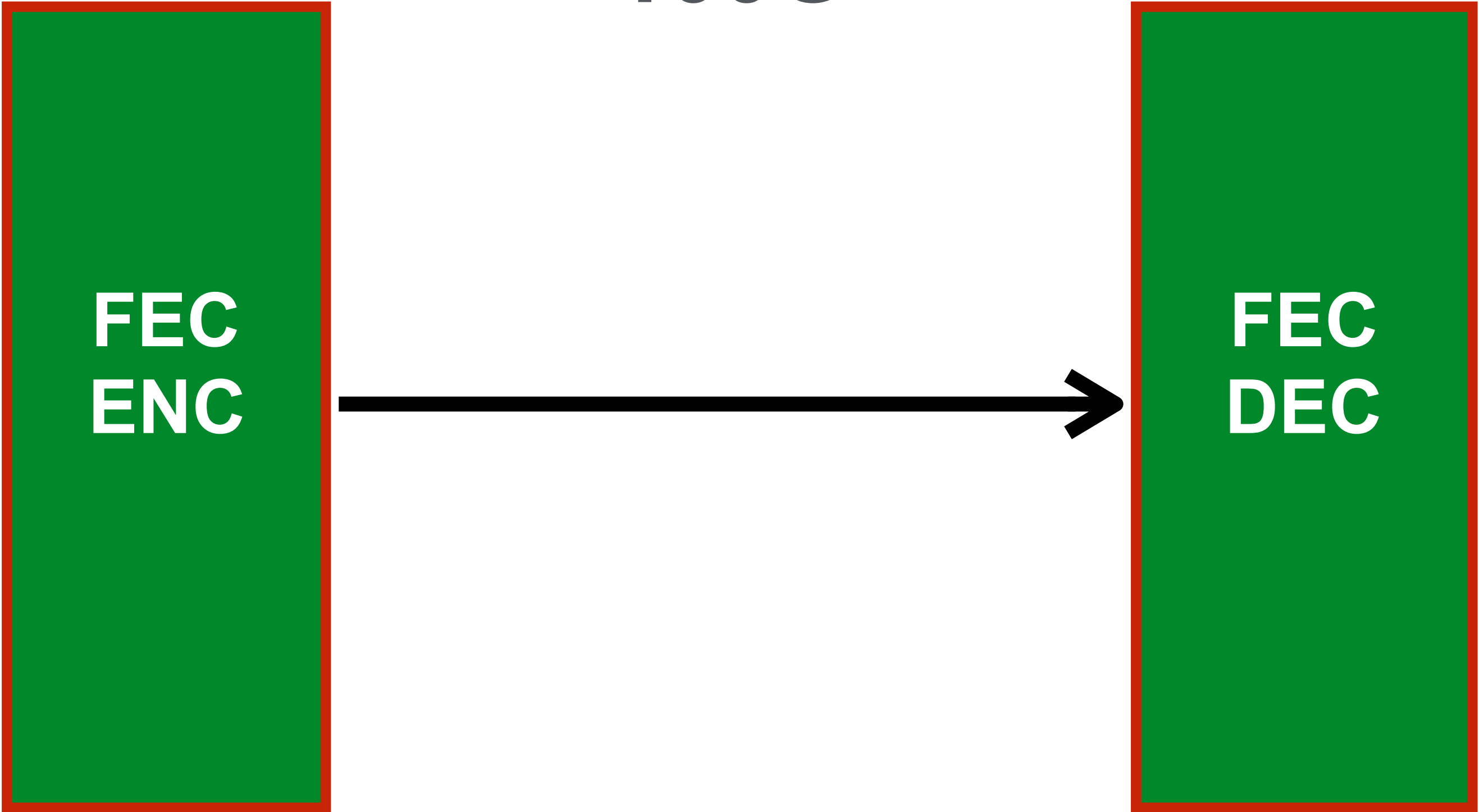
100G

FEC  
ENC

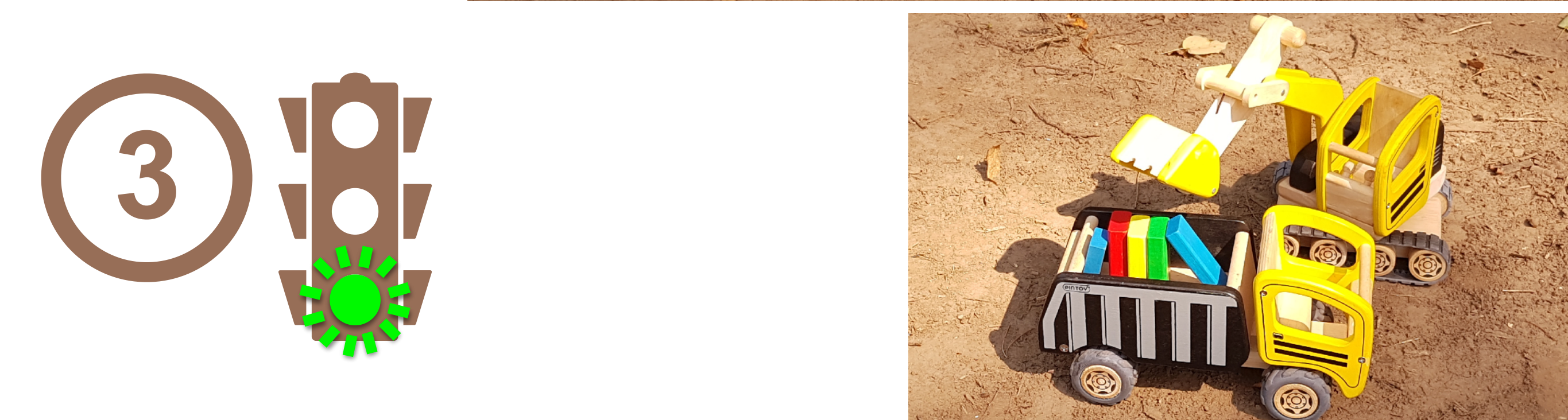
FEC  
DEC

Switch

Switch









400G

FEC2  
ENC

FEC2  
DEC  
+  
FEC1  
ENC



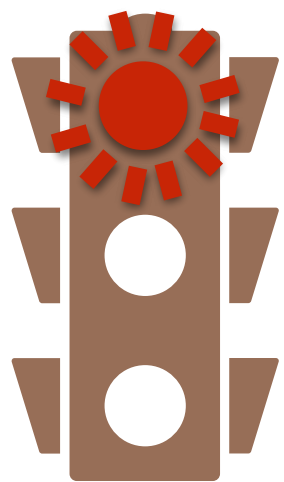
FEC1  
DEC  
+  
FEC2  
ENC

FEC2  
DEC

Switch<sup>QSFP-DD</sup>  
OSFP

<sup>QSFP-DD</sup>OSFP Switch





unequal # of  
FEC's in line



new





400 G LR4 → CWDn 4

100 G ER4 + ZR4

50 G ER







40 G  
25 G

DWDM CR



# THE FLEXBOX CREATORS

THOMAS.WEIBLE@FLEXOPTIX.NET



**1**

revolutionary  
developments



**56**

flexperts



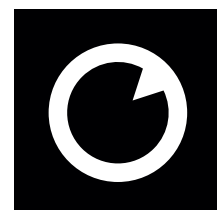
**48322**

transceiver  
compatibilities





**THANK YOU**



**FLEXOPTIX**