

# 100 overview

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# Input Output Optics (IOO)

- Input optics
  - ✓ Pre-Stabilized Laser (PSL) table
  - ✓ Input mode cleaner
  - ✓ Input Faraday Isolator
  - ✓ Input mode matching telescope
- Output optics
  - ✓ Output mode matching telescope
  - ✓ Output faraday isolator
  - ✓ Output mode cleaner

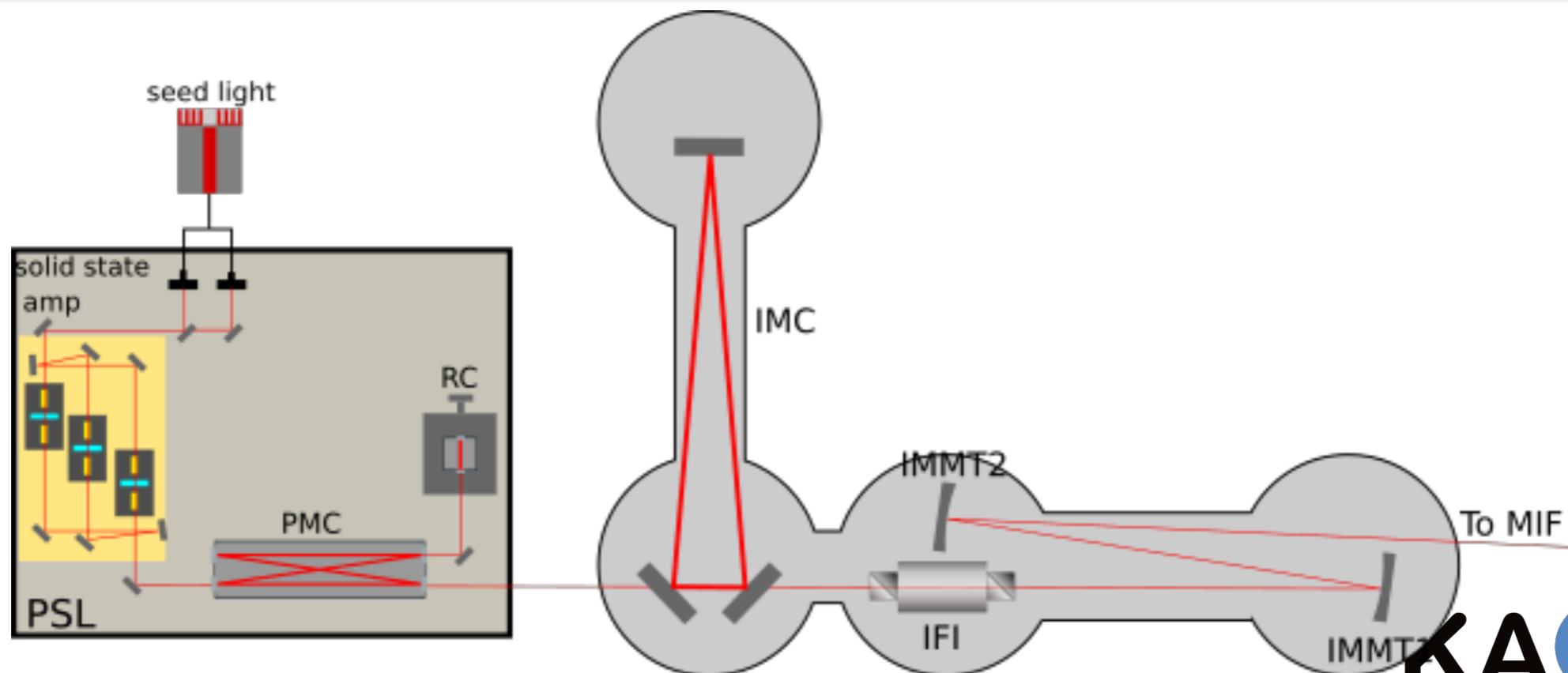


# Objectives of the input optics

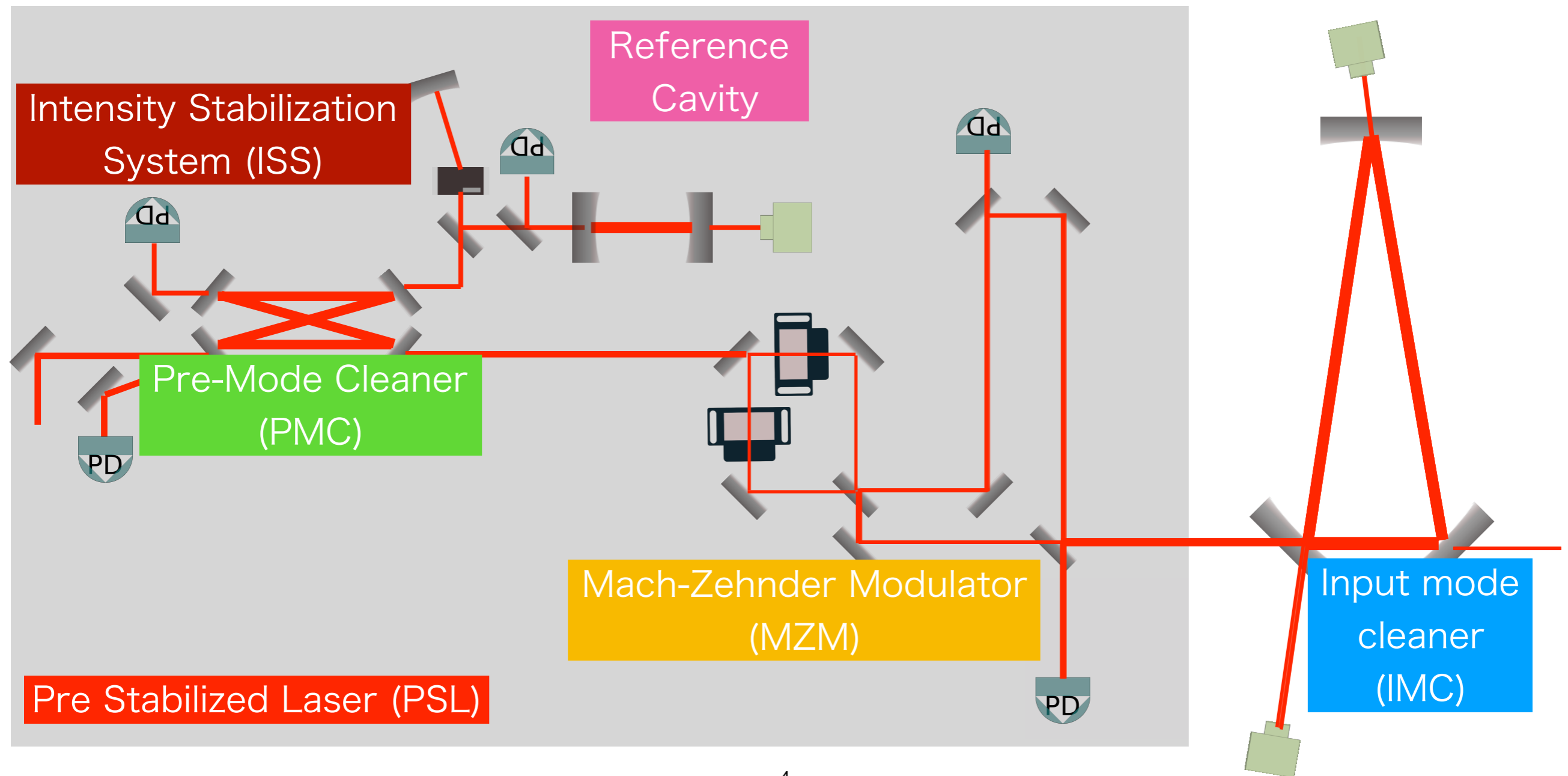
## Objectives of the input optics

Provide the stable laser to the main interferometer.

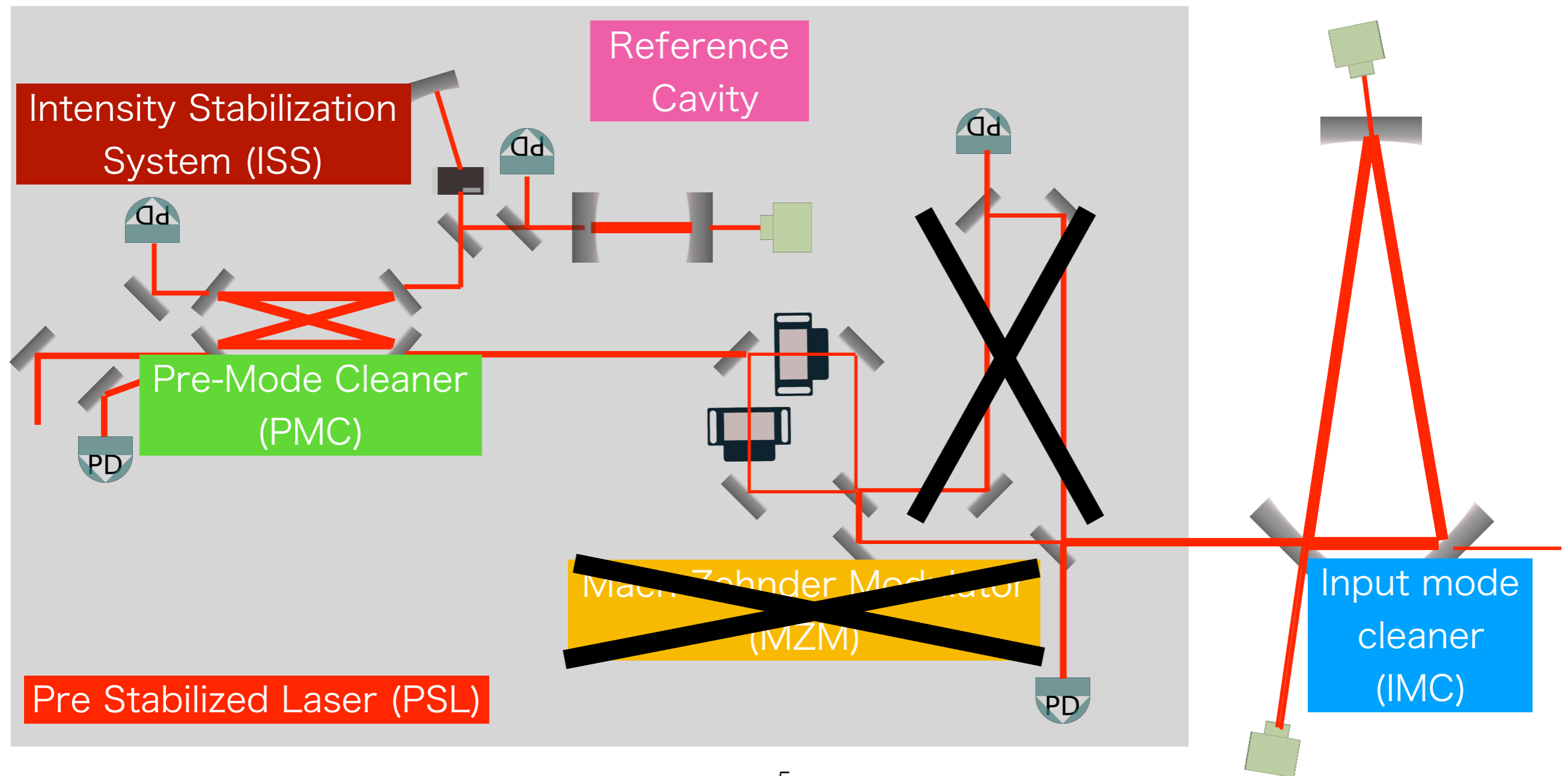
- ✓ The frequency stabilization
- ✓ The intensity stabilization
- ✓ The reduction of the beam jitter
- ✓ The cleaning of the spacial mode of the laser



# Overview of the input optics



# Overview of the input optics





MZM

FSS

PMC

ISS

# IOO Status

Status	
PMC	Installed and operated very stably. Noise budget (NB) has been done
RefCav	Installed and operated very stably. NB is on going
ISS	Installation is on going
MZM	Installed once, but removed and not used for O3 R&D is on going
IMC	Installed and operated very stably. Commissioning will be done.
HP test	Have done, and ready for 20 W output
OMC	Modification & commissioning is on going

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