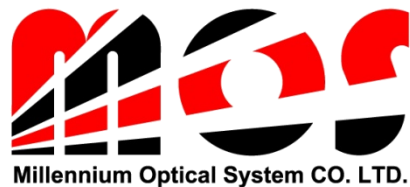




Millennium Optical System Company Profile





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Contact Information

History

Established in November 2000

2000

RMI U.S.A Exportation in 2001
JML U.S.A Exportation in 2002
The primary cooperated company with Samsung Tech Win in 2002
The primary cooperated company with Lil-Jin Display in 2004
The Primary cooperated company with LGE in 2005

The primary cooperated company with Doosan Infracore in 2006
Military optics part certification, USA in 2007
The cooperated company with LG Innotek in 2007
ISO 9001:2000 & 14001:2004 in 2008

2005

2010

Established USA(Colorado) Branch in 2011
Korea Military optics part certification in 2013
Moved to larger facility in Sambang-ri, Paju-City in 2013
Business partnership with Korea Polytechnic University in 2014
Business partnership with Korea Aerospace University in 2014

ISO 9001:2015 & ISO 14001:2015
Promising Export Firm in 2016
Inno-Biz in 2016
Product-specific approved exporter in 2016
Main-Biz in 2017
Promising small and medium-sized enterprise in 2017

2015~

History

2015

STIL(France) Exportation in 2015
CI System(Israel) Exportation in 2016
KLA Tencor Exportation in 2018

2020

ELBIT Security Exportation in 2020
Excelitas (USA) Exportation in 2022
Business partnership With Korea Solid Wintech in 2022
Defense Acquisition Program Administration contract in 2022
SCD(Israel) Exportation in 2023
Defense Acquisition Program Administration contract in 2023

the present

CEO ANNOUNCE

MOS was established in 2000 and started as a Manufacturer of optical components for Laser and Imaging Applications.

MOS is one of the few companies that possess extensive experience with Lens fabrication using a wide range of UV, Visible, and IR substrates. Unlike Lenses that are manufactured by a third source, all MOS Lenses are manufactured and tested in-house to ensure consistent quality. MOS filters are carefully manufactured and measured to ensure the most accurate wavelength selection available. From our standard color glass filters to accurate, multi-component filter systems, MOS is a total filter solution provider.

MOS has manufactured the highest quality of optical components including thin film coatings and optical assemblies to be used in Medical, Semiconductor and Industrial Applications.



CAPABILITIES

OPTICS

COATING

DESIG &
ASSEMBLIES

OPTICS

WINDOW

- Wedges
- Interferometer Flats

LENS

- Spherical
- Cylindrical
- Meniscus

PRISM

- Right Angle
- Corner Cube
- Porro
- Littrow

MIRROR

- Plane
- Concave
- Convex
- Metal

Optical Filters

Blue, Green, Red Filter
UV Filter, IR Filter
Bandpass Filter

COATING

ANTI-REFLECTIVE

- Single layer
- Multi layer
- Narrowband
- Broadband
- Multi wavelength

REFLECTIVE/TRANSMISSIVE

- Partial/Output coupler
- Narrowband
- Broadband
- Beam Combining
- Beam Splitting
- Multi-wavelength
- Harmonic

FILTER

- Narrowband
- Broadband
- Bandpass Filter
- Long wave pass
- Short wave pass
- Neutral Density

MIRROR HIGH REFLECTIVE

- Protected Metal
- Enhanced Metal
- Phase Retarding
- Hot and Cold
- Dielectric-Low/High Power
- ITO

DESIGN & ASSEMBLIES

Complete In-house Assembly and Testing Capabilities

Custom Design or Build-to-Print

Single to Multi-Component Assemblies

From Prototype to OEM Production

Full Compliance with Customer Specifications

MAIN PRODUCTS

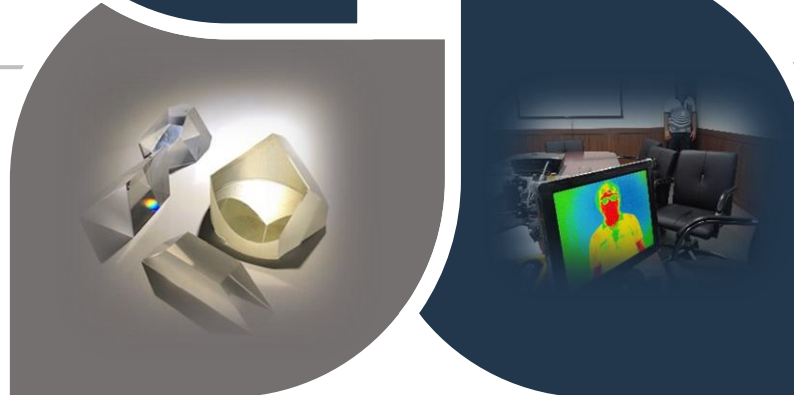
LENS

- Spherical Lens, Meniscus Lens, Cylindrical lens
- Chalcogenide, CaF₂, ZnSe, Si, Ge etc., IR Lens
- 2.0mm Cyl./spherical Pickup Lens
- 1500mm Spherical Mirror
- 600mm Parabolic Mirror



PRISM

- Right angle prism
- Dove Prism
- Penta Prism
- Roof Penta Prism
- Porro Prism
- Corner Cube Prism
- Rhomboid Prism
- Pecan Prism
- Littrow Prism
- Pellin Broca Prism



ASSEMBLIES

- F-theta Lens
- YAG beam Expander
- Co₂ beam Expander
- Converter lens
- Collimator Lens etc.

OPTICAL SYSTEM & MODULE

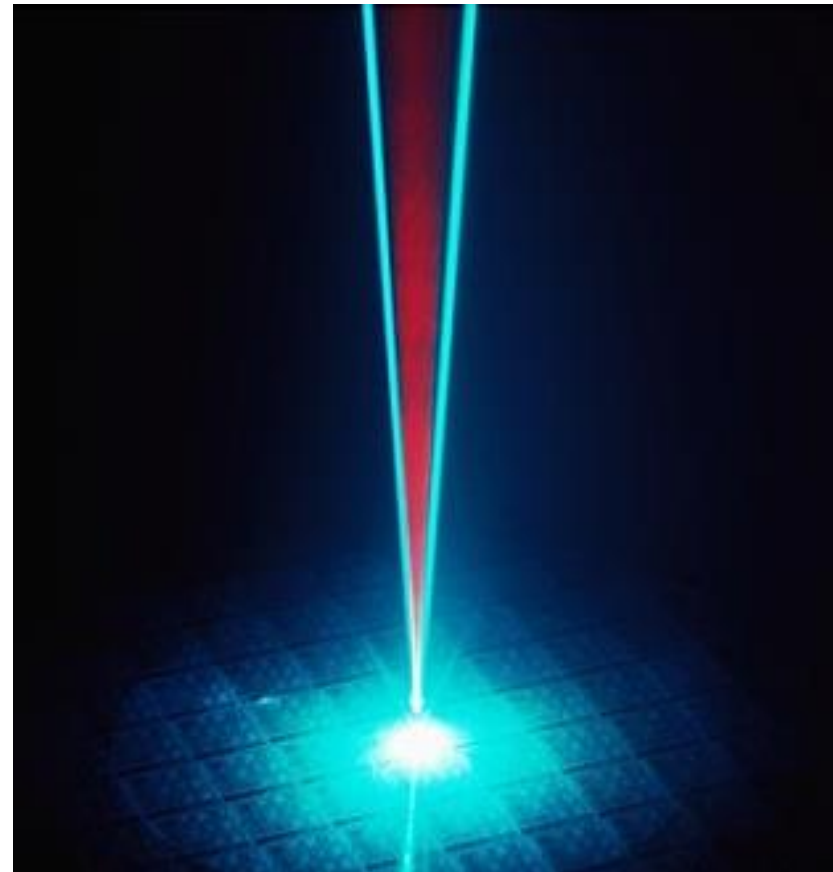
- Athermalized Mold Lens
- Thermal Lens
- Vein Recognition Camera(In-progress)



MAIN PRODUCTS



Laser Cutting Machine



Semiconductor Laser

MAIN PRODUCTS



Medical Laser



Operating room reflector

MAIN PRODUCTS

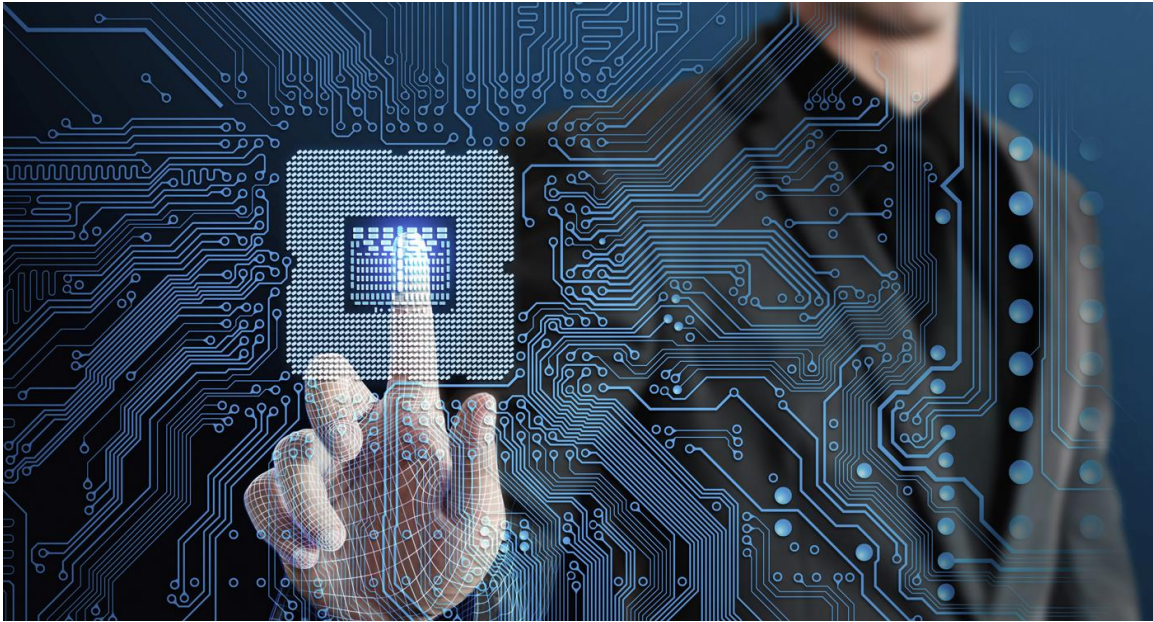


Thermal Imaging Camera



Optical Microscope

주요 생산품



Semiconductor fabrication and inspection equipment



Aerospace related optical components

주요 생산품



K2 Optical Parts



K9 Optical Parts

defense-related optical components

PROCESS

01

DESIGN

MAKE TOOLS

02

03

INSERT MATERIAL



SHAPE/CHAMFER MILLING



04

05

DEBLOCK

PROCESS



GRINDING

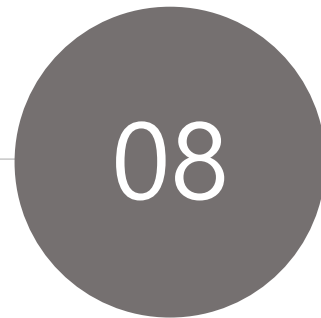


POLISHING

INSPECTION



BELVEL

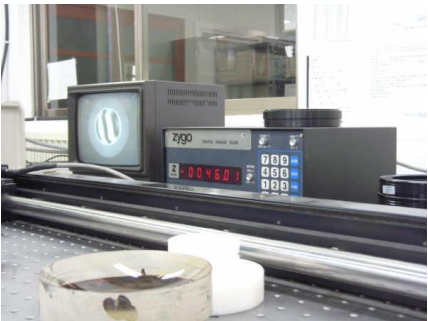


SIDE 1
BLCOKING



PROCESS

11
SIDE 1 INSPECTION



SIDE 2 BLOCKING

12

13

GRINDING



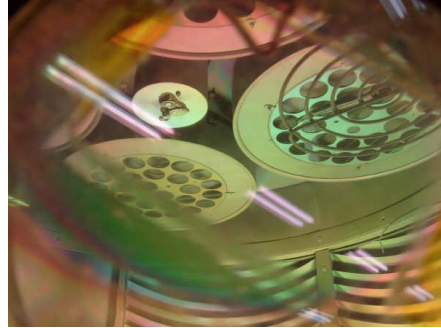
POLISHING

14

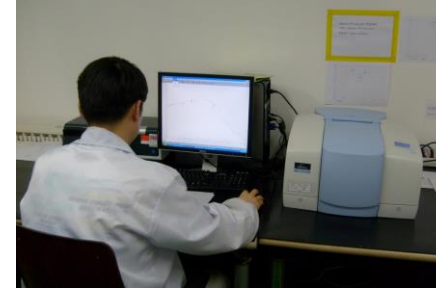
15

SIDE 2
INSPECTION

PROCESS



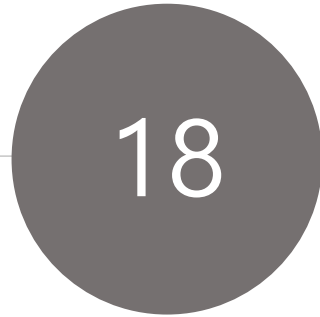
COATING



INSPECTION



CLEANING



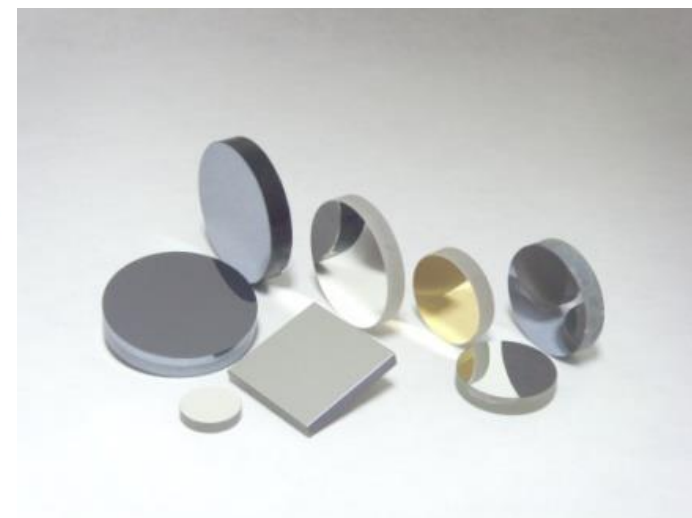
ASSEMBLY



SHIPPING



PRODUCTS



EQUIPMENT

PROCESS EQUIPMENT

No.	EQUIPMENT	MADE	QTY	YEAR
1	Plastic Molding Machine	JAPAN	1	2014
2	Rotary Milling	BLANCHARD(USA)	2	1972
3	Rotary Milling	ICHIKAWA(JAPAN)	4	1995
4	6 SPINDLE POLISHING M/C	SIDAE(KOREA)	12	2008/2010
5	4 SPINDLE POLISHING M/C	SIDAE(KOREA)	32	2001/2010
6	HIGH SPEED POLISHING M/C	SIDAE(KOREA)	32	2008/2010
7	CENTERING M/C	SIDAE(KOREA)	12	2001/2010
8	DOUBLE SIDE POLISHER M/C	WAIDA(JAPAN)	6	2011
9	CURVE GENERATION M/C	SIDAE(KOREA)	16	2008/2010
10	CUTTING M/C	SIDAE(KOREA)	2	2001
11	CYLINDRICAL GRINDING M/C	OKUMA(JAPAN)	2	2002
12	CYLINDRICAL POLISHING M/C	SIDAE(KOREA)	4	2002
13	FLAT POLISHING M/C	SPITFIRE(USA)	1	2001
14	COATOR(ϕ 600:2, ϕ 950:5, ϕ 1200:2, ϕ 1500:1)	INTEC(KOREA)	10	2001
15	ULTRA CLEANER (12set)	DAEHAN(KOREA)	1	2010
16	CLEAN BENCH	KOREA	6	2001/2010
17	OVEN(~ 300°C)	KOREA	2	2001
18	ϕ 2000 POLISHING M/C	MOS(KOREA)	2	2012
19	MACHINING CENTER	DOOSAN(KOREA)	3	2016

EQUIPMENT

MEASUREMENT EQUIPMENT

No.	EQUIPMENT	MADE	QTY	YEAR
1	SPECTROMETER(UV~NIR)	PERKIN ELMER(USA)	2	2010
2	SPECTROMETER(VISIBLE)	PERKIN ELMER/HITACHI	2	2007
3	SPECTROMETER(LONG IR)	PERKIN ELMER(USA)	1	2008
4	INTERFEROMETER	ZYGO(USA)	3	2001
5	AUTO COLLIMATER	NIKON(JAPAN)	4	2016
6	CENTERING SCOPE	PEARL(JAPAN)	2	2008
7	STEREO SCOPE	NIKON(JAPAN)	2	2009
8	AUTO CENTERING SCOPE	SAMWON(KOREA)	1	2013
9	VACCUM MICROSCOPE	MIRERO(KOREA)	1	2010
10	METALLURGICAL MICROSCOPE	SAMWON(KOREA)	1	2010
11	RADIUS LENGTHMETER	UNIVERSAL(USA)	1	1995
12	INTERFEROMETER	DIVISION(USA)	3	2012

EQUIPMENT

MEASUREMENT EQUIPMENT

No.	EQUIPMENT	MADE	QTY	YEAR
13	PROFILE PROJECTOR	NIKON	2	2006
14	TEMP&HUMID CHAMBER	OSUNG LST(KOREA)	1	2003
15	SALT SPTRY TEST	ALLTHREE(KOREA)	1	2020
16	CNC COORDINATE MEASURING MACHINE	Coord3	1	2014
17	PHASE GRATING INTERFEROMETER	TAYLOR HOBSON	1	2025


Salt Spray Test Equipment




■ SPECIFICATION

MODEL	ATST-30	ATST-50
SPEC'		
CHAMBER(SIZE)mm	600 ^W ×450 ^D ×450 ^H	900 ^W ×600 ^D ×600 ^H
MATERIAL (IN)	PVC PLATE	PVC PLATE
(OUT)	SUS 304 1.2T PLATE	
TEMP' CONTROLLER	DIGITAL P · I · D CONTROLLER	
TEMP' RANGE	AMBIENT +3℃ ~ 45℃	AMBIENT +3℃ ~ 60℃ CASSER
TEMP' ACCURACY	±1.0℃ AT 30℃	±1℃ AT 40℃
POWER SOURCE	AC 220V 1 ∅ 60Hz	
HEATER	KANTHAL PIPE, KANTHAL WIRE HEATER	
THERMO-COUPLE	Pt 100Ω TYPE	
SPRAY SYSTEM	ACRYL 수지 NOZZLE TYPE	
AIR COMPRESSOR	0.4kw	
SAFETY DEVICE	OVER HEATING & OVER CURRENT	
POWER CONSUMPTION	2.4Kw	3.4Kw

Precision Aspheric Contouring Machine


Model	NanoForm 350	Travel	X-Axis	~ 350mm	
Maker	Precitech, USA		Z-Axis	~ 250mm	
		Speed		~ 1,500mm/min	
		Driver System		AC Linear Motor	
		Feedback Resolution		8.6nm	
		Straightness	X-Axis	0.3 μ m/350mm, 0.05 μ m/25mm	
			Z-Axis	0.2 μ m/250mm, 0.05 μ m/25mm	
			Vertical	0.7 μ m/350mm, 0.05 μ m/25mm	
		Application		Aspheric Lens Manufacturing	

Ultra High Accurate 3D Profilometer				
Model	UA 3P-5	Measuring Range	200 x 200 x 45	
Maker	Panasonic, USA	Measuring Probe	Atomic Force Probe	
		Measuring Speed	0.01 ~ 10mm/sec	
		Max. Inclination Angle	60°	
		Measurement Accuracy with Probe (Ruby stylus)	30° max.	0.01 ~ 0.05μm
			45° max.	Up to 0.1μm
			60° max.	Up to 0.3μm
		Measurement Accuracy	10nm	
		Application	Aspheric Surface Evaluation	

EQUIPMENT

COOPERATED EQUIPMENT

기업을 품는 산학융합 선도대학
KPU 한국산업기술대학교
(KOREA POLYTECHNIC UNIVERSITY)

Laser Interferometer			
Model	MOT600-300	Max. Sample Diameter	600mm
Maker	Opticentric, Japan	Max. Sample Height	800mm
		Max. Distance between Measuring Head and Tilt / Translation Table	900mm
		Max. Sample Weight	50Kg
		Max. Load Capacity of the Air Bearing	500Kg
		Application	Aspheric Lens Centering Measurement

조직도



Office management
& Technical Sales
8



Quality Control
8

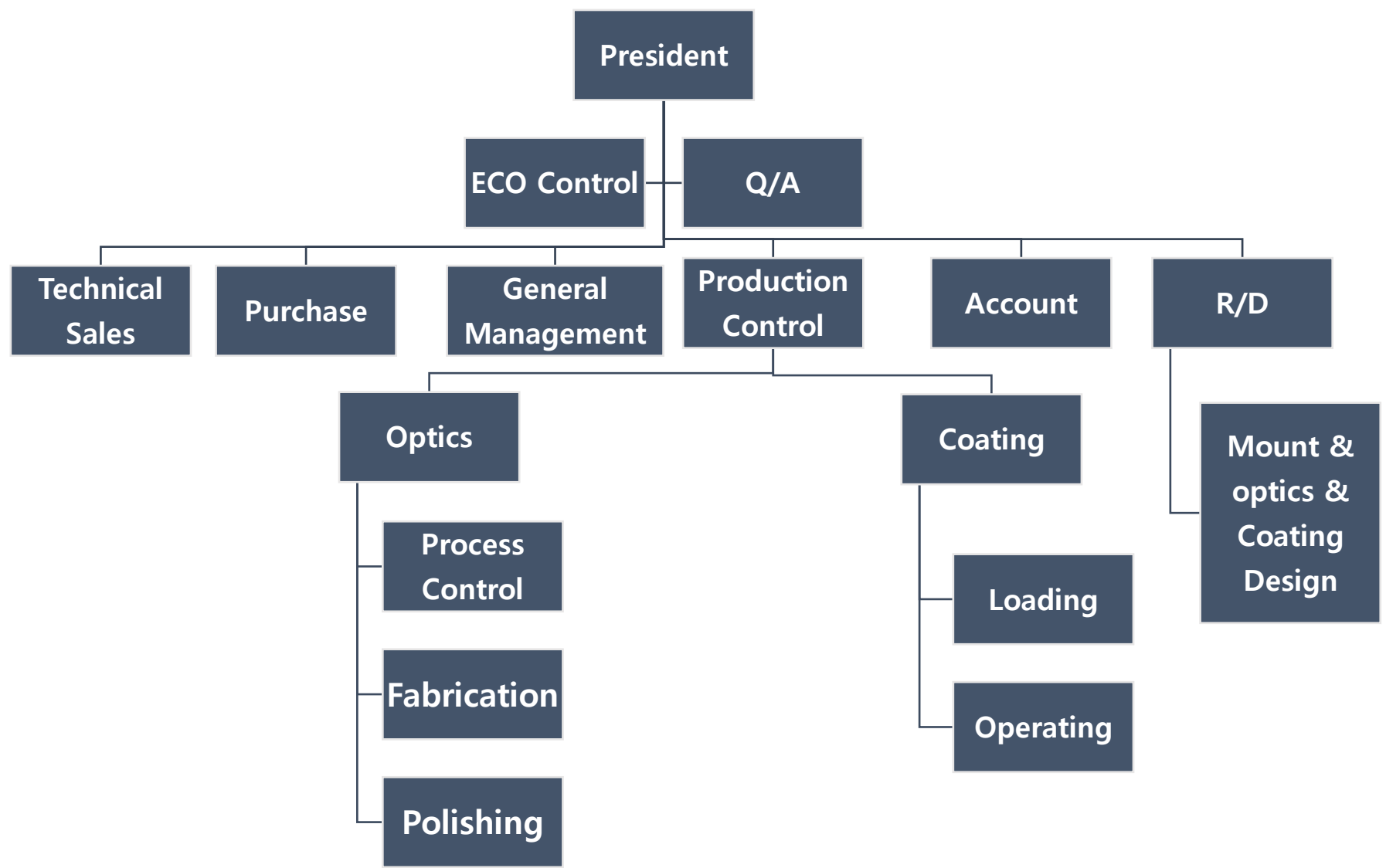


Engineer
8



Technician
30

ORGANIZATION CHART



Contact Information



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**Millennium Optical System
Thank you!**

