LIGO-T1000381-v1

Coating Quantity	10	10	6	9	3	4	4												
Type	ITM	ETM	BS	CP	FM	PR3	SR3		PR2	F-PR2	SR2	F-SR2	PRM	F-PRM	SRM	F-SRM		erm	
Blank spec	E080031	E080047	E080035	E080037	E080045	E080041	E080041		E080039	E080039	E080040	E080040	E080028	E080028	E080029	E080029			
Blank Dwg	D080039	D080055	D080050	D080051	D080054	D080053	D080053		D080052	D080052	D080053	D080053	D080038	D080038	D080039	D080039			
Polish Spec	E080511	E080512	E080514	E080513	E080515	E080516	E080518		E080519	E080520	E080521	E080522	E080523	E080524	E080525	E080526			
Polish Dwg	D080657	D080658	D080660	D080659	D080661	D080662	D080664												
Coating Spec	E0900041	E0900068	E0900073	E0900074	E0900072	E0900071	E0900069												
Serial Number	ITM XX	ETM XX	BSXX	CPXX	FMXX	PR3XX	SR3XX		PR2XX	F-PR2XX	SR2XX	F-SR2XX	PRMXX	F-PRMXX	SRMXX	F-SRMXX			
Surface Quality																			
min diameter, max diameter, in mm	120mm,160mm	120mm, 260mm	170mm,255mm	120mm, 160mm	170mm,225mm	120mm,160mm	120mm, 160mm												
Max Scratches S1 inside min mm (um^2 x 10^-3)	20000	20000	500000	500000	500000	500000	500000		62	62	250	62	62	62	62	250	20 ppm for the beam size		
Max Scratches S1 between min/max mm (um^2 x 10^	500000	500000	150000		1500000				240000	240000	240000	240000	240000	240000	240000	240000			
Max Scratches S2 inside min mm (um^2 x 10^-3)	240000	1000000	1000000	500000	NS	NS	NS		NS	NS	NS	NS	1900	1900	1900	1900	100 ppm for the beam size		
								Inspection over 10mm -->											
Max Point Defects S1 Inside min mm	10	10	50	50	50	50	50		0	0	0	0	0	0	0	0			
Max Point Defect Density S1 inside min mm	1 per 4mm^2	1 per 4mm^2	5per mm^2	5per mm^2	5 per mm^2	5per mm^2	5per mm^2		1 per 4mm^2	1 per 4mm^2	1 per 4mm^2	1 per 4mm^2	1 per 4mm^2	1 per 4mm^2	1 per 4mm^2	1 per 4mm^2			
Max Point Defects S1 between min/maxmm	100	100	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	NS			
Max Point Defects inside min mm dia S2	100	100	100	50	NS	NS	NS			NS	NS	NS	1	1	1	1			
General																			
Center Wavelength	1064 nm	1064 nm	1064 nm	1064 nm	1064 nm	1064 nm	1064 nm		1064 nm	1064 nm	1064 nm	1064 nm	1064 nm	1064 nm	1064 nm	1064 nm			
Angle of incidence	0	0	45 deg	0	45 deg	deg, folded - 1.144 deg	774 deg, folded - 0.916 deg		straight - 0.748 deg, folded - 0.963 deg	0.963 deg	0.878 deg	0.878 deg	0	0	0	0			
Coating Uniformity	<0.1% in 21.5 cm diameter	<0.1% in 21.5 cm diameter																	
Absorption requirement	<0.5 ppm	< 0.5 ppm	< 1 ppm	<1ppm	< 1 pm	< 1 ppm	< 1 ppm		< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm	< 1 ppm			
Absorption goal	<0.3 ppm	< 0.3 ppm																	
Coating Area	To Bevel	To Bevel	To Bevel	NS	To Bevel	To Bevel	To Bevel												
Surface 1																			
Transmission at 1064 nm	0.013 - 0.015	5 ppm +/- 1 ppm	0.5 ±0.005		<15 ppm	<15 ppm	<15 ppm		250 ± 50 ppm	) ± 50 ppm	<15 ppm	<15 ppm	0.030	0.030	0.20	0.20			ar
Transmission Matching at 1064 nm betwee	see spec																		
Transmission at 532	<0.01, goal <0.001	0.03 - 0.15, goal of 0.05																	ar
Thermal Stability of 532 design	See spec	see spec																	
Coating Material	doped ta205	doped ta205																	
Surface 2																			
Reflection at 1064 nm	< 50 ppm, goal < 20 ppm	< 500 ppm requirement	< 50 ppm m, < 20 ppm goal.		<0.004	<0.004	< 0.004		< 0.4%	< 0.4%	< 0.4%	< 0.4%	< 50 ppm	< 50 ppm	< 50 ppm	< 50 ppm			
Reflection at 532 nm	NS	0.001 < R < 0.02																	