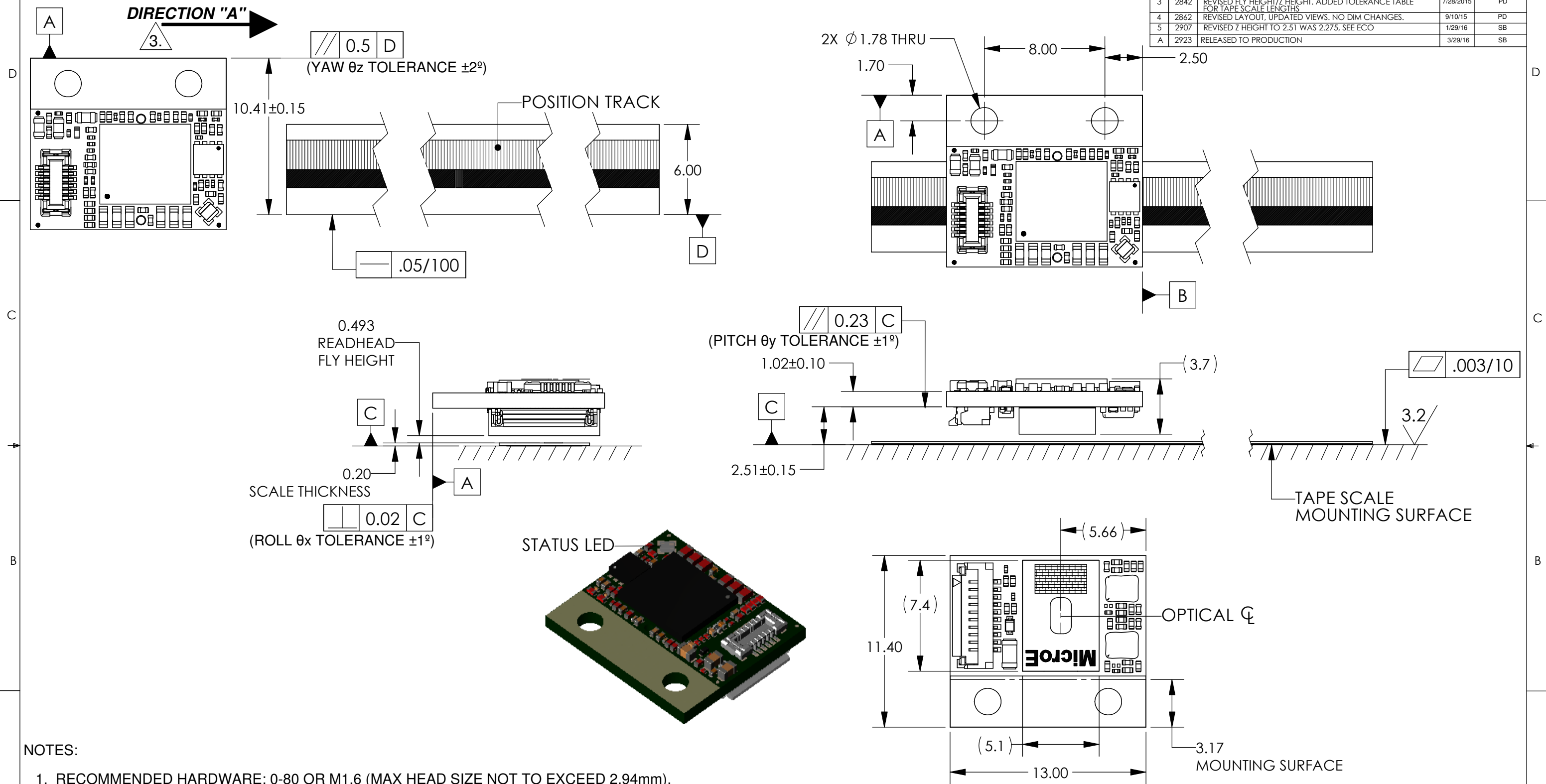


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REVISIONS				
LTR	ECO	DESCRIPTION	DATE	APPROVED
1	2806	INITIAL	5/7/15	PD
2	2825	REVISED RISER THICKNESS, FLY HEIGHT CHANGED. SEE ECO	6/2/15	PD
3	2842	REVISED FLY HEIGHT/Z HEIGHT. ADDED TOLERANCE TABLE FOR TAPE SCALE LENGTHS	7/28/2015	PD
4	2862	REVISED LAYOUT, UPDATED VIEWS. NO DIM CHANGES.	9/10/15	PD
5	2907	REVISED Z HEIGHT TO 2.51 WAS 2.275, SEE ECO	1/29/16	SB
A	2923	RELEASED TO PRODUCTION	3/29/16	SB



NOTES:

1. RECOMMENDED HARDWARE: 0-80 OR M1.6 (MAX HEAD SIZE NOT TO EXCEED 2.94mm).
MAX. TORQUE: 3 in/lbs
2. RECOMMENDED ENCODER MOUNTING PLATE THICKNESS:
MINIMUM - 4 SCREW THREADS
MAXIMUM - ALLOW CLEARANCE TO SCALE AND SCALE MOUNTING HARDWARE (BENCHING SURFACES, CLAMPS, HUBS, ETC.)
BENCHING EDGES: IF BENCHING THE ENCODER, AN EDGE OR PINS CAN BE USED ALONG DATUM A ONLY.
BENCHING EDGE OR PINS MUST BE A MINIMUM OF 1.50mm IN HEIGHT FROM MOUNTING SURFACE.
3. WHEN PILT TAPE SCALE MOVES IN DIRECTION "A" WITH RESPECT TO A STATIONARY READHEAD, OUTPUT SIGNAL A+ (PIN 1) LEADS OUTPUT SIGNAL B+ (PIN 3).

UNLESS OTHERWISE SPECIFIED		APPROVALS	DATE
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS). DIM APPLY AFTER PROCESSING INTERPRET ALL GEOMETRIC TOLS. PER ANSI Y14.5M-1982		DRAWN S.BUTURLIA	4/16/2015
TOLERANCES ARE: DECIMALS: .XX[X] ±.01[.25] .XXX[X].XX ±.005[.13]		CHECKED	
ANGULAR: ±30 MIN.		ENGRG. PAUL. R	3/8/2016
		MFG ENG JAY. G	3/8/2016
		QA MATTHEW. R	3/8/2016

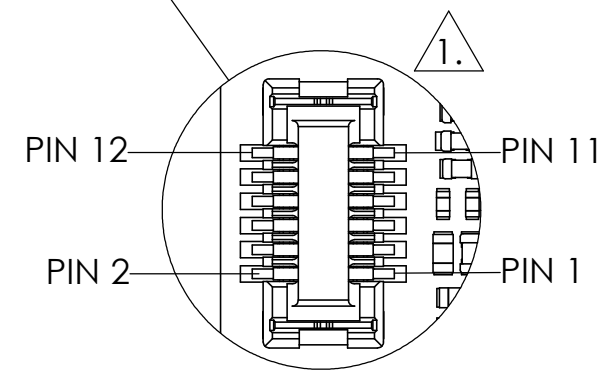
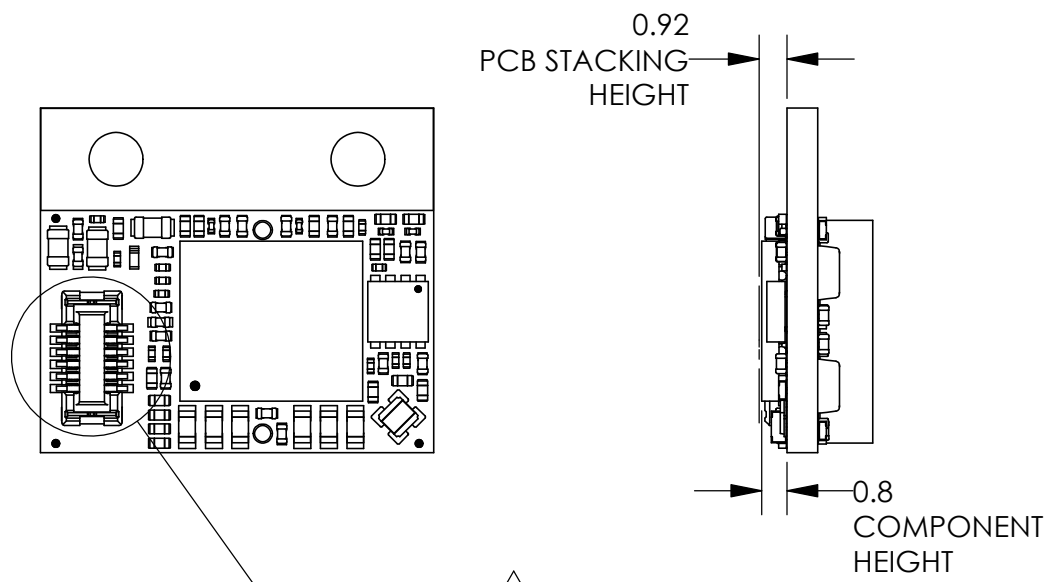
MicroE
(GSI Group Corporation)
125 Middlesex Tpk.
Bedford, MA 01730

DESCRIPTION:
**INTERFACE, ENCODER, 20um,
OPTIRA, PILT TAPE SCALE**

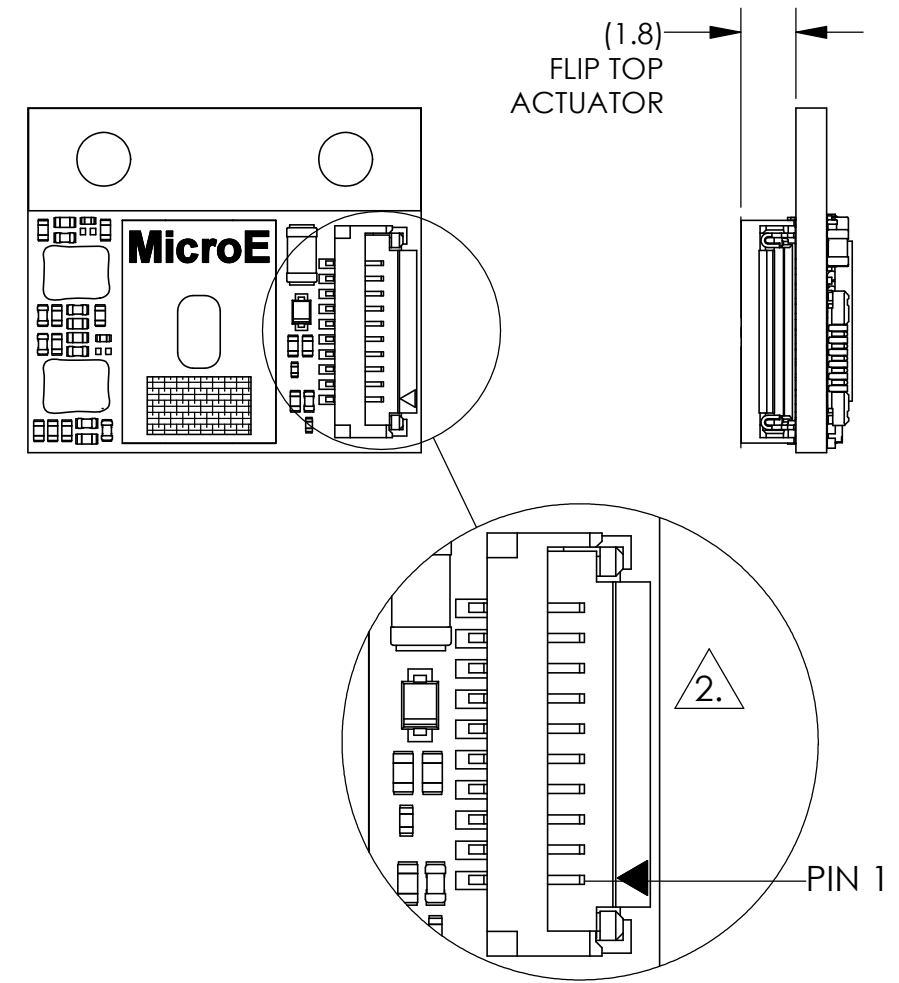
SIZE DWG. NO. REV.
B ID-00400 A

SCALE: CAD FILE: SHEET 1 OF 3

8 7 6 5 4 3 2 1



Pin Number	Signal	
	A-quad-B	Analog
1	A+	SIN+
2	A-	SIN-
3	B+	COS+
4	B-	COS-
5	INDEX+	INDEX+
6	INDEX-	INDEX-
7	ALARM	ALARM
8	CAL	CAL
9	PWR	PWR
10	GND	GND
11	N/C	N/C
12	N/C	N/C



Pin Number	Signal	
	A-quad-B	Analog
1	A+	SIN+
2	A-	SIN-
3	B+	COS+
4	B-	COS-
5	INDEX+	INDEX+
6	INDEX-	INDEX-
7	ALARM	ALARM
8	CAL	CAL
9	PWR	PWR
10	GND	GND

NOTES:

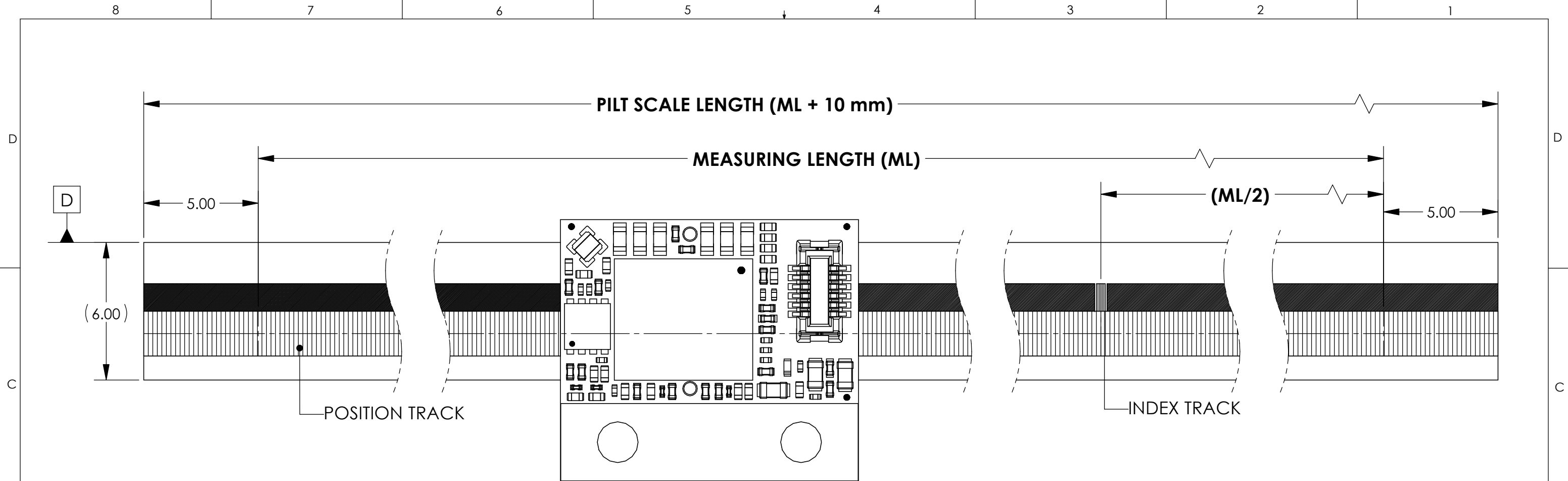
- 1. CONNECTOR, HEADER, BOARD TO BOARD, 12 CONTACTS
MOLEX# 501594-1211 (MATING CONNECTOR MOLEX# 501591-1211).
REFER TO MANUFACTURING SPECIFICATION SHEET ON STACKING HEIGHTS AND REQUIREMENTS.
- 2. CONNECTOR, ZIF, FFC/FPC, FLIP TOP ACTUATOR, HORIZONTAL MOUNTING, 0.5mm PITCH, 10 CONTACTS
HIROSE ELECTRIC CO# FH33-10S-0.5SH(10). REFER TO MANUFACTURER SPECIFICATION SHEET FOR FPC/FFC CONSTRUCTION.

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DESCRIPTION:
INTERFACE, ENCODER, 20um,
OPTIRA, PILT TAPE SCALE

SIZE	DWG. NO.	REV.
B	ID-00400	A
SCALE:	CAD FILE:	3RD ANGLE PROJECTION SHEET 2 OF 3

8 7 6 5 4 3 2 1



- NOTES:
1. PILT CAN BE SUPPLIED IN INDIVIDUAL PIECES OR IN CONTINUOUS FORM.
 2. FOR ALTERNATE INDEX LOCATIONS, MULTIPLE INDEXES OR ADDITIONAL FEATURES; CONTACT MICROE.

Optira Tape Scale Tolerance	
Length	Tolerance
10mm - 500mm	-0 / +2mm
501mm - 1000mm	-0 / +5mm
1001mm - 5000mm	-0 / +13mm
> 5000mm	-0 / +15mm

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 125 Middlesex Tpk.
 Bedford, MA 01730

DESCRIPTION:
 INTERFACE, ENCODER, 20um,
 OPTIRA, PILT TAPE SCALE

SIZE B	DWG. NO. ID-00400	REV. A
SCALE:	CAD FILE:	3RD ANGLE PROJECTION SHEET 3 OF 3