

Oiles Lutech E Conductive polyacetal bearings



Feature

- Electrically conductive.
- Serviceable without the need for lubrication and demonstrates superior friction characteristics in light-load and high-speed conditions.
- Features low coefficient of friction and superior wear resistance.
- Prevents stick slips and squeak noises.
- Non-rotating type standard products are available for replacement of sintered bearings.



Service range

Lubrication condition	Dry
Service temperature range °C	-40~+80
Allowable max. pressure P N/mm ² {kgf/cm ² }	9.81 {100}
Allowable max. velocity V m/s {m/min}	0.83 {50}
Allowable max. PV value N/mm ² · m/s {kgf/cm ² · m/min}	0.327 {200}

Lathe turning

Cutting tool	carbide tool (JIS)		Condition	Speed (m/min)	100~250
	Relief angle	5~10°		Cut depth (mm)	0.10~0.50
	Rake angle	10~20°		Feed (mm/rev)	0.05~0.20
	Nose radius (mm)	0.20~0.40			

Attention should be paid to dimensional variances due to thermal expansion, chucking, and bend of the material.

Machining accuracy (bushing)

I.D.	O.D.	Length
class 8 to 9	class 7 to 8	class 9 to 10

Classes here are in JIS standard.

This product demonstrates satisfactory performance at the slide surface roughness of Rz6.3 to 12.5μm.

Dimensions may change due to thermal expansion, chucking pressure, moisture absorption deformation, etc. High accuracy is ensured if the product is installed on the housing and then ground.

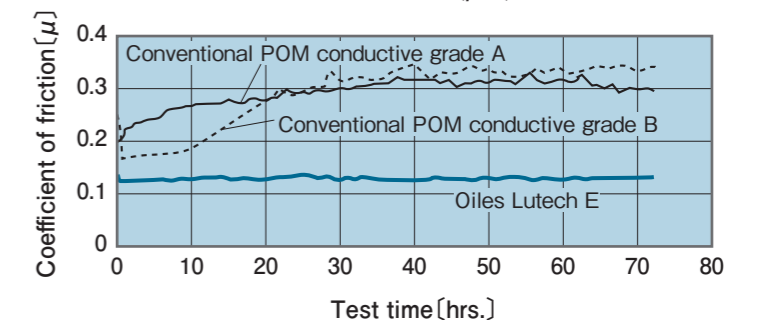
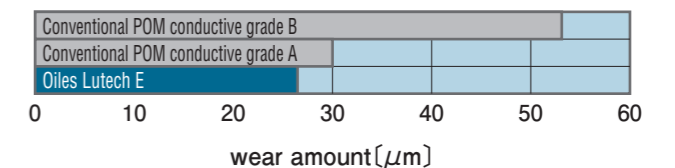
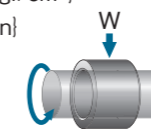
Mechanical properties			Lutech E	Lutech E-02
Specific gravity	ASTM D 792	—	1.47	1.38
Tensile strength	ASTM D 638	N/mm ² {kgf/cm ² }	47.5 {484}	42.9 {438}
Tensile elongation at break	ASTM D 638	%	3.2	23
Flexural property	ASTM D 790	N/mm ² {kgf/cm ² }	76.2 {777}	71.9 {733}
Flexural modulus	ASTM D 790	N/mm ² {kgf/cm ² }	3,007 {36,670}	2,595 {26,459}
Compressive stress	ASTM D 695	N/mm ² {kgf/cm ² }	1% deformation	21.7 {221}
			10% deformation	88.9 {907}
Hardness	ASTM D 785	HRM	95	90
Izod impact strength (with notch)	ASTM D 256	J/m {kgfcm/cm}	33 {3.36}	31 {3.16}
Co-efficient of linear expansion	ASTM D 696	×10 ⁻⁵ °C ⁻¹	8~13	8~13
Deflection temperature under load 1.82 MPa	ASTM D 648	°C	118	117
Melting point	DSC	°C	165	—
Volume resistivity	ASTM D 257	Ωm {Ω · cm}	0.504 {5.04×10}	0.308 {3.08×10}
Surface resistivity	ASTM D 257	Ω	5.31×10 ²	2.21×10 ²
UL combustibility	UL94	File No.E78113	HB	HB

※The values shown above are typical values, not the standard values.

Test data

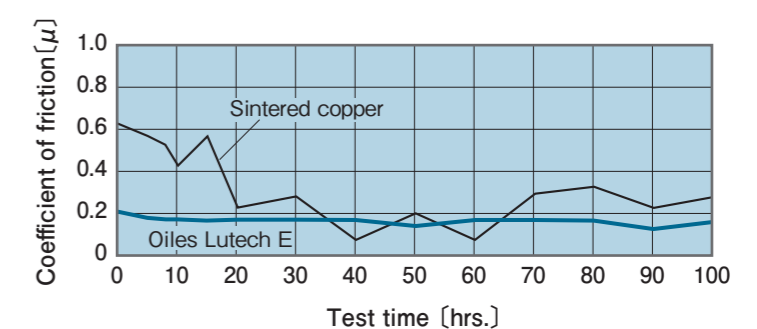
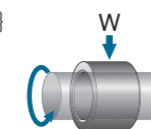
Journal rotation test

<Testing conditions>
 Bearing dimension : φ10×φ14×ℓ 10
 Mating material : S45C (surface roughness Rz0.8μm)
 Pressure : 0.98N/mm² {10.0kgf/cm²}
 Velocity : 0.17m/s {10.0m/min}
 Test time : 72hrs.



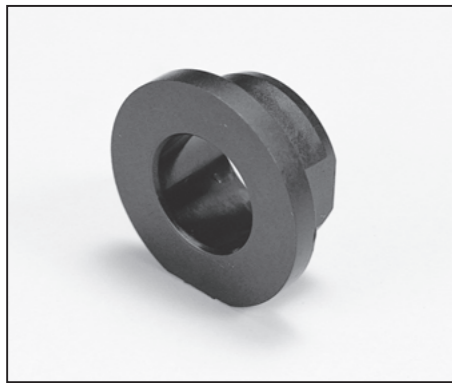
Journal rotation test

<Testing conditions>
 Bearing dimension : φ10×φ14×ℓ 10
 Mating material : SUS303
 Pressure : 0.20N/mm² {2.0kgf/cm²}
 Velocity : 0.03m/s {2.0m/min}
 Test time : 100hrs.



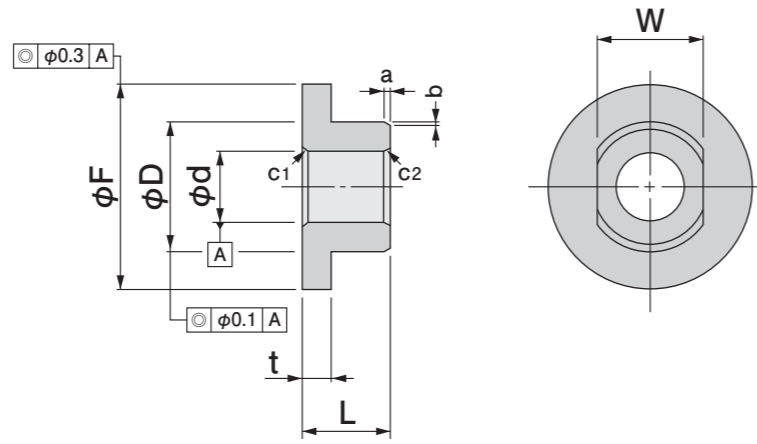
LED

Oiles Lutech E Bushings

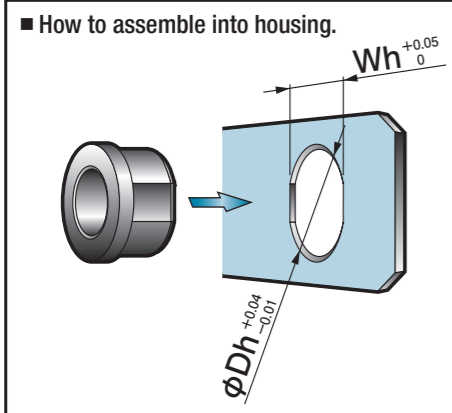


Specify Part No. by required I.D. and length.
(e.g.) I.D. is 6mm and length is 6mm.

LED - 0606
Part No.



• The both sides of the outer diameter are cut.



phi Dh and Wh are recommended mating hole dimension.

a b: Chamfering for O.D.		c: Chamfering for I.D.	
a	1	c1	C0.3
b	0.3 (mm)	c2	C0.5 (mm)

LED-0635	
a	0.5
b	0.2
c1	C0.3
c2	C0.5 (mm)

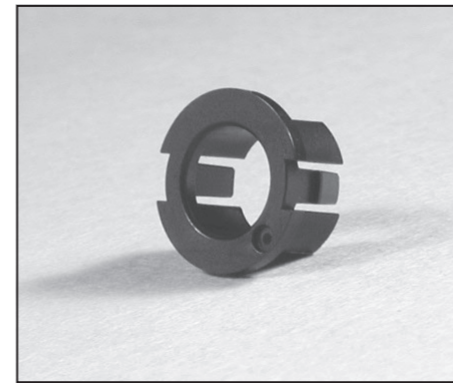
Part No.	I.D.		O.D.		W	Tolerance	Flange			Length	
	phi d	Tolerance	phi D	Tolerance			phi F	t	Tolerance	L	Tolerance
LED-0404	4	+0.05/0	8	-0.01/-0.06	5.8	0/-0.1	10	1.0	±0.1	4	±0.2
LED-0605	6	+0.05/0	9	-0.01/-0.06	7.8	0/-0.1	14	2.0	±0.1	5	±0.2
LED-0635	6	+0.05/0	10	-0.01/-0.06	8.8	0/-0.1	12	1.5	±0.1	3.5	±0.2
LED-0606	6	+0.05/0	10	-0.01/-0.06	8.8	0/-0.1	12	1.5	±0.1	6	±0.2
LED-0895	8	+0.05/0	11	-0.01/-0.06	9.8	0/-0.1	13	1.5	±0.1	9.5	±0.2
LED-0807	8	+0.05/0	12	-0.01/-0.06	10.8	0/-0.1	16	2.0	±0.1	7	±0.2
LED-1005	10	+0.05/0	14	-0.01/-0.06	12.8	0/-0.1	18	2.0	±0.1	5	±0.2

※The effective range of the outer diameter tolerance is up to 3 mm from the flange bottom.
※The recommended clearance is 0.030 to 0.095 mm for each dimension.

▲ The dimensional tolerances are the values measured at +25°C.

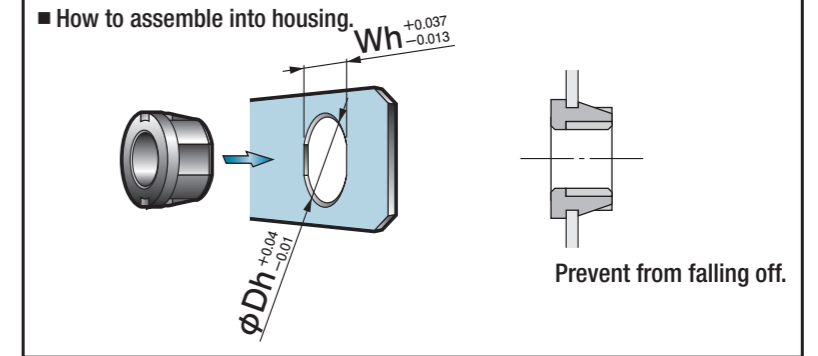
LES

Oiles Lutech E-02 Snap-fit Bushings

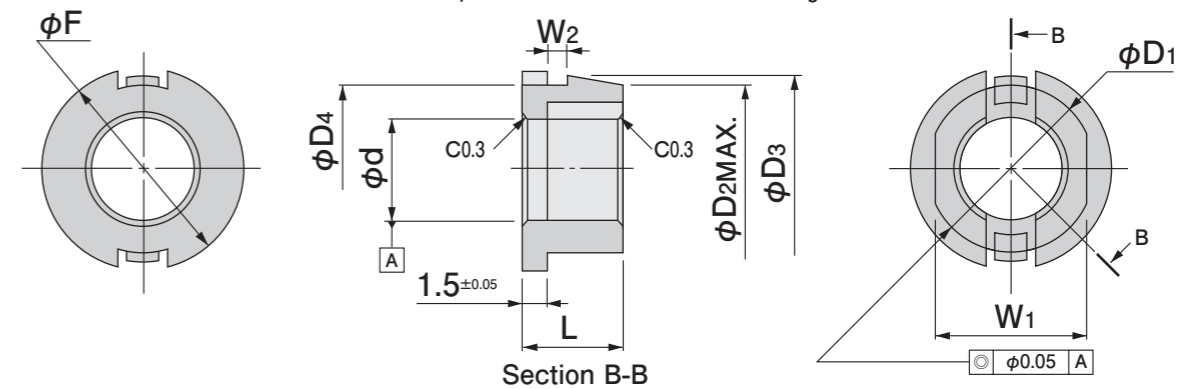


Specify Part No. by required I.D. and W2 dimension.
(e.g.) I.D. is 6mm and W2 dimension is 1.6mm.

LES - 0616
Part No.



phi Dh and Wh are recommended mating hole dimension.



Part No.	I.D.		O.D.				Flange	Length		W1	Tolerance	W2	Tolerance		
	phi d	Tolerance	phi D1	Tolerance	phi D2 MAX.	phi D3		Tolerance	phi D4					phi F	L
LES-0608	6	+0.05/0	10	-0.01/-0.06	9.9	11	+0.1/0	10	12	6	±0.2	9	-0.013/-0.049	0.8	+0.2/+0.1
LES-0612	6	+0.05/0	10	-0.01/-0.06	9.9	11	+0.1/0	10	12	6	±0.2	9	-0.013/-0.049	1.2	+0.2/+0.1
LES-0616	6	+0.05/0	10	-0.01/-0.06	9.9	11	+0.1/0	10	12	6	±0.2	9	-0.013/-0.049	1.6	+0.2/+0.1
LES-0812	8	+0.05/0	12	-0.01/-0.06	11.9	13	+0.1/0	12	14	7	±0.2	10	-0.013/-0.049	1.2	+0.2/+0.1
LES-0816	8	+0.05/0	12	-0.01/-0.06	11.9	13	+0.1/0	12	14	7	±0.2	10	-0.013/-0.049	1.6	+0.2/+0.1
LES-0820	8	+0.05/0	12	-0.01/-0.06	11.9	13	+0.1/0	12	14	7	±0.2	10	-0.013/-0.049	2.0	+0.2/+0.1

※The recommended clearance is 0.030 to 0.095 mm for each dimension.

※When used in a hole made in a sheet-metal, the snap fit is scraped by burrs made when punching. It is recommended to remove burrs with a grinder before use.

▲ The dimensional tolerances are the values measured at +25°C.

LEM

Oiles Lutech E Bar Stock



Specify Part No. by required diameter.

(e.g.) Diameter is 31.5mm. **LEM - 30**
Part No.



Part No.	Diameter		Length
	phi D	Tolerance	
LEM-20	21.5	±0.4	500
LEM-30	31.5	±0.4	500
LEM-40	41.5	±0.5	500
LEM-50	52	±0.5	500