

3

2
25.10.2001 .

2001

621.391.6

• •

• •

,

• •

23

2

2001 .

1

() (),

2

()

(-4...12)

50
- 125

2.1

*(splices)
(connectors)

()

2.1.1

2.1.

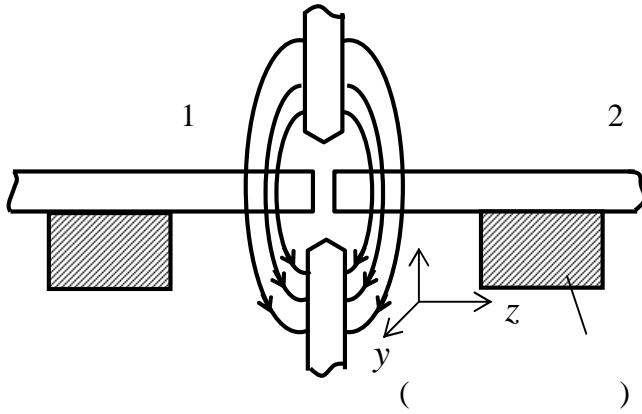
* - ().

()
detection – LID).

LID-

(light injecting and

(10...20)



2.1 –

LID-

()

() ,

0,25 ;

0,1 .

()

(-,) .

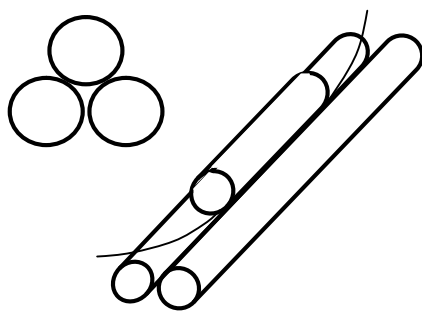
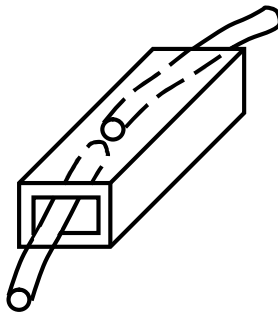
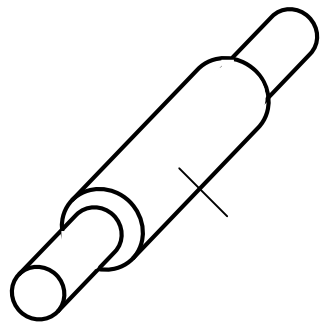
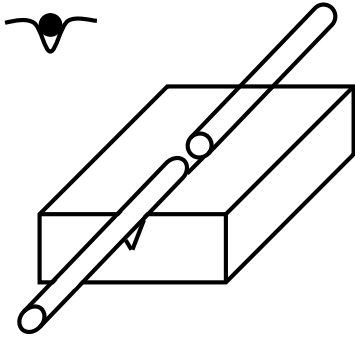
2.1.2 ,

2.2.

V-

(2.2,)

,
 ,
 ,
 ,
 V-
 ,
 ()
 ,
 ()
 2.2
 V-
 ,
 (2.2,)



2.2 -
)

;) ' :) V- ;
;) ;)

(2.2,) *

(8.19,).

2.2

1.

2.

3.

4.

5.

*

6.

7.

8.

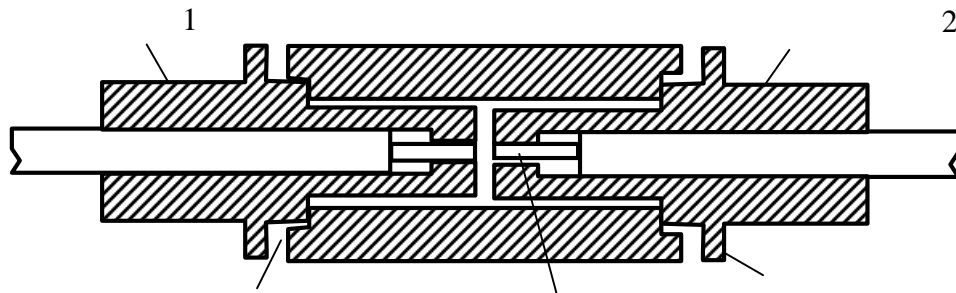
9.

2)

[1]

: 1)

2.3



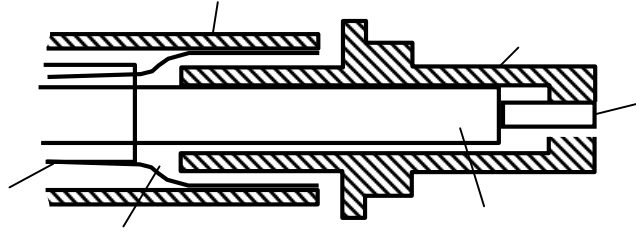
2.3 -

SMA-*

2.3

*

(2.4)

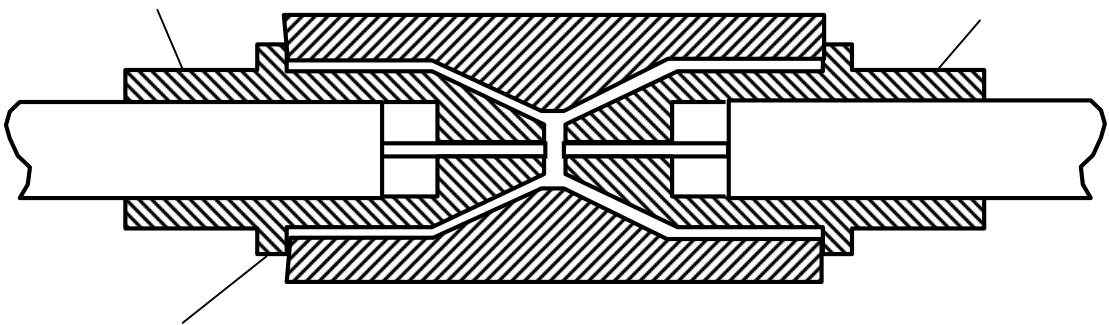


2.4 -

()
2.5,

(2.5).

2.5 (),



2.5 -

2.3

2.6.

	FC	80-	-
1000	(flat)	2,5	4
40	" (FC-),	≤ 0,3	
	D4		
1000	FC-		2
	S (Straight tip – 1985		
		(NC)	
		2,5	
		0,3 (– 0,7)
	40		
	SC (Subscriber connector –		
1000			
0,3	– 40		SC-
	FC- D4-		
	S -		
	SMA (Sub-miniature type A –		
			F (fiber) –
FSMA).	70-		
	SMA-905 –	3,2	
SMA-906 –		3,0	
	1,5 (30 %).		
	BIC (Biconnical connector –		

• – Physical Contact –

MIC (*Medium interface* – 2.6). **FDDI-connector** (*Fiber distributed data interface* – 2.6).

MIC-

SC-

500

0,5 0,3

≥ 35

ESCON (*Enterprise system connector* – 2.6).

MIC-FDDI,

500

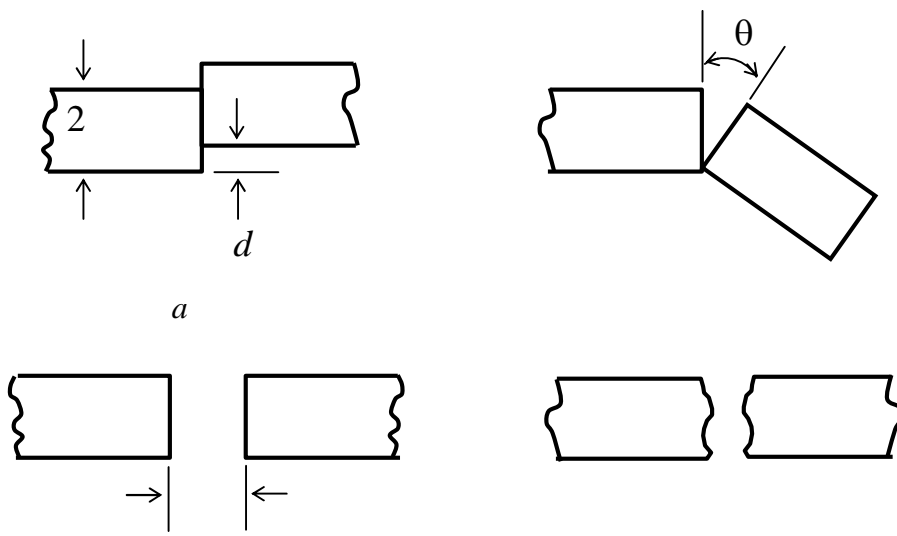
0,5

35

. 2.1.

2.1 –

FC/PC		0,3	40	1000
ST		0,3	40	1000
		0,3	-	1000
		0,6	-	1000
		0,7	-	250
SC	/	0,3	40	1000
SMA		1,5	-	200
IC		1,0	40	500
MIC (FDDI)		0,3	35	500
		0,5	-	500
ESCON		0,5	35	500
DNP	/	2,0	-	-
	/	0,2	40	-
“ - ”: , / -				



a

8.1 -

NA

[1]:

$$a_d = -10 \lg \left\langle \frac{2}{\pi} \left\{ \arccos \frac{d}{2a} - \frac{d}{2a} \sqrt{1 - \left(\frac{d}{2a} \right)^2} \right\} \right\rangle, \quad (2.1)$$

$$a_\theta = -10 \lg \left(1 - n_0 \theta / NA \right), \quad (2.2)$$

$$a_x = -10 \lg \left(1 - \frac{xNA}{4an_0} \right), \quad (2.3)$$

$n_0 -$

[1].

3

1. , ,
2. , , ?
3. , , ?
4. , , ?

- 5. , ? , ,
- 6. , ,
- 7. , , .
- 8. , .
- 9. , ,
- 10. , ?
- 11. ,
- 12. () ()
,)
?

4

4.1 , ,
[1], [2] [3].

4.2 .

4.3 $2 = 50$ $NA = 0,24$
(2.1)...(2.3) $n_0 = 1 ()$,
0...9, $n_0 = 1 ()$.
. 4.1

4.1 –

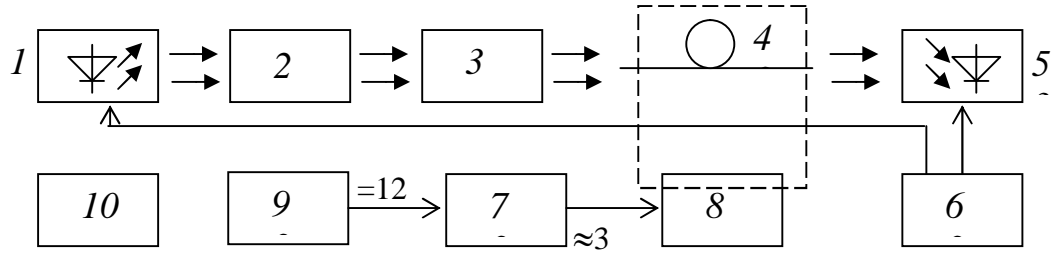
-	0	1	2	3	4	5	6	7	8	9
<i>d</i> , .	6	8	10	12	14	16	18	20	22	25
θ , .	9	8	7	6	5	4	3	2	1	10
,	50	45	40	35	30	25	20	15	10	5

4.4 : , , ,

5

5.1 () 5.1, : 1 –
()
-76; 2 – ; 3 – ;
4 – ; 5 – () ;
6 – ; 7 – ;
8 – ; 9 – ($\approx 220 / = 12$)

; 10 -



5.1 -

5.2

5.2.1

3 () .¹²

1800° .

- xyz).

5.2.2.

-76.

(),

()

()

6

!

1.

2.

3..4 .

3.

4.

5.

6.

7.

8.

()

(.)

(

).

9.

10.

11.

()

(.)

12.

13.

(

).

7

7.1.

≈ 220 ,

≈ 3 !!!

7.2.

(

).

7.3.

!

!

3000 .

!

8

1.

2.

()

1...2 .

,

-

3.

1,

4.

5.

6.

7.

$$= \lg(1/2), \quad = \lg(0,3) - \lg(0,2),$$

8.

9

1.

2.

3.

4.

5.

10

1.

... : ... : - “ ”, 2001. - 426 .

2.

... / : ,1999. - . 65-82.

3.

... : : - “ ”, - 1994. - 387 .