# CR-400/410

Manual

, , , . DP

.

- \* , CR-400/410 2 . CR-400 , . .
- 1 P. 21~
- 2 P. 53~ DP , DP \* . DP, S/W CR-S4w, CR-S3w
  - 3 DP P.57~ DP

.

.

<

#### White Calibration





>

#### Head> <



- 1. Power switch : ON/OFF
- 2. RS-232C
   : DATA PROCESS
   PC
   DATA
   RS-232C

   3. AC
   : AC
   (AC-A17)
   , AC
- .
- 4. :
- : 5. 4 4
- 6. : CR-400 CR-33a,c,d,f
- CR-410 CR-33e] [ 7. LCD : DATA
- 8. Ready Lamp : ( ) .
- 9. : ,
- 10. Wrist( ) :

: . ( .) < Head key Panel >



- 1. Calibration key 🖾 :
- 2. Delete/Undo key Use : data7 data . ,



- 5. Color space key
   .

   6. Enter key
   .
- 7. Target color key (Target) :

- 5 -

<Data Processor>



- : ON/OFF 1.
- 2. RS-232C : head PC DATA RS-232C
- , AC 3. AC : AC
- 4. Roll Paper:5. Printer:data
- 6. LCD : DATA
- 7. : 가
- 8. : 3 4
- .
- : 9.
- 10. BUZZER : BUZZER가 .

<Data processor key pannel>



data

.

, page

,

- [ ]
- Calibrate 1.
- / Delete Undo 2 ABC 2.
- \* data list data /
- \* page, data list page list
- list
- \* CH list , Print Feed 3 DEF : \*
- 3. / paper
- 4. option key 4 eHI : option Display 5 JKL 5.
- Color Space 6 MND 6.
- Statistic 7 pors 7.
- data , page 8. data list Beta List
- data page Page 9 wxyz 9. page page

- СН . , , data list data page data .
- . ( )
- data list data data list data ,
  - .

data

10.	Es	:		,							
*		, da	ita								
11.	Index : D	Set . *	(	, )		, data	,		3	, back	light, buzzor,
12.		Target Symbol							. (		)
13.		÷ *									
(	) *	, data lis	t	data	,	data	No	±1			
(	) *	, data lis	t	data	,	data	No	±10			
*	,	, page,	,		Ch		,		1		
	,	page									
14.		Measure Enter		,							
*		,									
*			. (							)	
(		)									
*		,									
*											



- 9 -

가

Option

,

, data pro	cessor	, data processor 가 .
* data processor	가	, p58 .
/	, p.34	
Index		
-		
		/
		/
		pass/cauiton/fail
		1 .
		1data
	data list	data /
	backlight	
	pc mode	

가

.

.

\* , s/w CR-S4w, CR-S3w 가 .

\* User Index , s/w 가 . ( 48)

data

data

baud rate

CMC parameter

#### LCD Display

Contrast	1~12	6	LCD Display		
			LCD Display	on/off	•
Back light	OFF/ON	OFF	ON	30	
Baud rate	4800,9600,19200	9600	PC	parameter	baud rate
PC mode			PC ,	data	

1. ON ,

(2)

2.

ENTER



- 11 -



0	TOO	[0001]-	-0
~	[L#=	14.72	
9-	8#=	15.82	
	TAL*=	+0.11	
<u>a</u> -	48*=	-0.01	
G.	∆b‡=	+0.11	
	L&E*=	0, 11	
		1	
	660	8	

.

[	]	
	data	
		data
[	]	
	data	
	data	
[	Icon ]	



2.	1	Low	Battery	*	가	,

- 3. 🔀 (Battery Out) \* 가 ,
- C (C) : C . , D (D65) : D65 .



"1"~"30"

, data processor . P.72 .

- 가 . . C C
- D65 D65

•





/

\* 1

<

2

, user index

.

(O: Valid, X: Invalid)

> /

/

,

	Sy	lode	rilo	ninant.	Displayed	color limit		Changing display				
Color space	Absolute value	Color	C	D65	C	D65	Absolute value	Color	Alexandre velore Helex differentes	Indgement	Calor differ	
XYZ	X Y Z	AX AY AZ	O	0	ON	ON	0	0	0	0	0	
Yzy	Y x y	AY Ax Ay	o	0	ON	ON	0	0	0	0	0	
L*a*b*	L.	AL* An* Ab* AE*	0	0	ON	ON	0	0	0	0	0	
Honter Lab	L R D	AL An Ab AB	0	0	QIN	ON	0	0	0	0	O	
L-C-L	10 A	AL" AC* AH* AB*	O	0	ORN	ON	0	0	0	0*1	0*1	
CMC (bs)	ե՞ Շե	ALC ACa AHC CMC	0	0	OFF (1.0:1.0)	OFF (1.0:1.0)	0	0	0	<b>0*1</b>	0*1	
CIE1994	L* C* 1	AL94 AC94 AL994 AE94	0	0	OFF	OFF	0	0	0	O*1	0*1	
Lab99	1.99 199 199	AL.99 A199 Ab99 AE99	0	Ô	OFF	OFF	Û	0	0	0	0	
10199	1199 (799 1699	AL99 AC99 AH99 AE99	0	o	CHT	OFF	٥	0	0	0*2	0*2	
CIE2000	ե* Շհ	AL00 AC00 AI300 AE00	0	0	OFF	OFF	0	0	0	<b>0+</b> 1	0*1	
WI B313	WI	AWI	O	x	OFF	82	0	0	0	0	X (Absolute value color (Absolute)	
YI D1925	Я	AYI	0	x	OFF		0	0	0	0	(Abeckepe (Abeckepe (Abeckepe)	
YI E913	YI	AYI	0	X	OFF	3 <b>-</b> 2	0	0	0	0	(Ahaphaya valuorening	
Manasil	H V C	Ξ	0	X	ON		0	(Absolute value)	(Absoluto value)	(Albendeto value)	(Abecieto milita)	
CIE WI/Tw	WI Tw	AWI ATw	X	0	8 8 <del>7</del> 8	ON	0	0	0	0	(Absolute valuestation difference)	
User index *4	Up to 9	characters.	0	0	ON (At registra- tida)	(Al motor	0	X (Abaotute value)	(Absolute value)	(Abgelato value)	(Abachto	

\*1: Graph display and judgement at ΔL\*, Δa\*, and Δb\*
\*2: Graph display and judgement at ΔL99, Δa99, and Δb99
\*3: Only screen display of data processor
\*4: The registration by only PC is available.

<

1

2

#### user index

/

(O: Valid, X: Invalid)

> /

Symbol Color differ		Color differen	kar difference target color			Color difference tolecance type			
Color space	Absolute value	Color Difference	Mosurement input	Numeric taput	Elliptical tolerance	Box-type tolennce	AB	Hoz-type tol- entrace and AB	
XYZ	X Y Z	АХ АҮ А2	0	0	Ø	0	О (АЕ*)	O (AE**)	
Үху	Y X Y	AY Az Ay	0	٥	0	0	0 (AE**)	O (AE*)	
L*a*b*	L.4 8.9 6.9	АL* Ал* Аb* АB*	0	0	0	0	0	0	
Hunter Lab	L B b	AL AL AD AE	0	0	0	0	0	0	
L*C*L	36.4	AL* AC* AH* AE*	0	X	0*1	<b>O*</b> 1	o	0*1	
CMC (1:0)	104	ALo AC: AH: CMC	0	x	O*1	<b>O</b> *1	0	0*1	
CIR1994	10 h	AL94 AC94 AH94 AB94	0	x	0*1	C#1	o	O#1	
Lab99	1.99 1199 1599	AL99 A199 Ab99 AB99	0	0	0	0	0	0	
LCH99	1.99 C99 b99	AL99 AC99 AH99 AE99	0	x	0*2	0*2	o	0*2	
CTR2000	16-	AL00 AC00 AH00 AE00	0	X	0*1	0*1	0	0*1	
WI E313	WI	AWI	0	x	x	0	x	X	
YI D1925	YI	ΔYI	0	x	x	٥	X	x	
YI BIJ	YI	IYA	0	x	X	o	X	x	
Monsell	H Y C	-	X	x	X	x	X	x	
CIE WI/TW	WI Tw	ΔWI ΔTw	0	x	X	0	X	x	
User index *4	Up to 9 cha	matem	0*3	O*3	X	x	x	x	

\*1: Input color difference tolerance at  $\Delta L^*$ ,  $\Delta a^*$ , and  $\Delta b^*$ \*2: Input color difference tolerance at  $\Delta L99$ ,  $\Delta a99$ , and  $\Delta b99$ \*3: Input at XYZ color space \*4: The registration by only PC is available.

Г L

] [





[WHITE CALIB.] Y=\_98, 5 x=0.3114 y=0.3190 1

White calibration data has been set.

data



(

)

< >

. CAL EBC cala DITE EAD Ready lamp -Specimen









- COLOR data ,
- data ,
- .
- , Delete/Undo key data data Delete/Undo key
- . , data , data , ( data 가,
- ( data \* data , 1000data
- 1000data , data data





.)

.

- 18 -

[	]					(XX7)	(Vvv)	(  *a*b*)	(	Lab)
, (L*C*H*)						(∧1∠),	(TXY),	(L a D ),	(	LaD),
<		>								
			,	T00~99	, 100			•		
< >										

, DATA DATA PROCESSOR DP-400 , KEY







color is set to T00.

.

, TOO

•

No.3







Setting the color difference target color to new T01.



4.

3.

\*

ready lamp

data가



,

(previous measurement data)

- 20 -



,

.

·

1.

<

<

>

>

2. ready lamp

			1	
	Y	Z	4	ĺ
	A	月		
Ť			4 ]	~
			7	

TOO	[0 0 0 2]
L+=	89.20
a •=	1,79
b#=	15.05
AL ==	-0.02
∆a•=	+0. 05
∆b*=	<b>+0.0</b> 1
∆E <b></b> ≉=	0.06
6	Ĩ

Mesurement data



Color difference target color is set to T00.





4.

5.

\*



7.			ready la	amp가		
*			,			•
<	>					
		,	가			
			3~7			

•

TOD	[0008]
L+=	81.21
8*=	1.79
b*=	15. 21
∆L+=	-1. 11
¥84=	+1. 15
∆b*=	+1.17
<b>∆E</b> +=	I. 18
C	

Mesurement data

.

.

- \* data , ,
- \* data • /
- / data , ,
- , data , .
- data , 1000data \*

- data
- data가
- data

,

.



.

- 1.
- 2.

[TARGE	T]	
TQQ		
<b>L</b> #=	89.	<u>??</u>
8\$=	1.	74
b#=	15.	84
NEW: [C]	[]] 1	

3. EMER

.

TOOT	[0001]
L*=	19.26
8*=	1, 74
b * =	14.88
<b>∆L</b> *=	
A8*=	
<u>Ab</u> *=	
<u>∆</u> E‡=	
Ĉ	1

Mesurement data



5. reday lamp가

.

•

4.

 T t 0
 [0 0 0 2]

 L \*=
 19, 20

 a \*=
 1, 71

 b \*=
 15, 05

 AL \*=
 -0, 02

 A3 \*=
 +0, 05

 Ab \*=
 +0, 01

 AE \*=
 0, 06

 Image: Compare the sum of the sum of

#### data



- \* data 001 , data가
- \* , data가



## data /

1. , Delate

.

- \* data
- \* back up , .



## User Index

- \* 가
- user index

.

- , pass/fail
- \* 가 PC , 6 . DATA processor , .
- \* USER INDEX CR-400 S/W CR-S4w S/W CR-S3w7

# Delete/Undo key



.

, RS-232C PC , PC DATA , RS-232C DATA AC (AC-A17) .

<PC >

 RS-232C
 CR-A 102
 PC(PC/AT)
 ,

 DATA
 PC
 , PC
 DATA
 .

 PC
 ,
 CR-400
 S/W CR-S4w,
 CR-S3w
 .

[PC] 가. PC DATA, DATA PC DATA USER INDEX



RS-232C

DATA가

가

#### Communication Parameters

,

Item	Setting	
Baud rate	4800bps 9600bps 19200bps	
Charactor length	8bit	
Parity	None	
Stop bit	1 bit	

### • RS-232C cable pin number/signal connection diagram







1. OFF PC RS-232C . RS-232C terminal @

2. ON .



ΤΊΙ

П



- 29 -

## 2 DATA Processor /

,	, DATA Processor,	CR-S4w	, CR-S3w

가		
1.		
<	>	
2.		
< >		
3.		
< >		
< >		
4.		
<		>
<	>	
<pass (<="" fail="" td=""><td>/ /</td><td>)&gt;</td></pass>	/ /	)>
< >		
5. DATA		
<data< td=""><td></td><td>&gt;</td></data<>		>
< DATA >		
6.		
< >		
<6 >		
< >		
< >		
<data></data>		
< >		

CMC parameter



- 3.
- < >

.

< >



, .

data data copy가 , .

6. < > . <6 > , , , , • , < > data data . , . ( ) processor , data processor < > C D65 . <DATA > DATA 가 1000data , data . < > XYZ, Yxy, L\*a\*b\*, Lab, , 15 가 .

.

CMC parameter CMC parameter 0.1~9.9

#### 3 DATA PORCESSOR

#### DATA PROCESSOR ,

.

### DATA PROCESSOR

DATA	PROCESSOR 가	•	
			page
		/	
		/	
		1 ,	
		( )	
		1 .	
		1data	
		data /	
		1dtta /	
	Data list	page	
DATA		page	
		page . page	
	page	page .	
		page	
	data		
		-	
		-	
		-	
		-	
	CMC parameter		
	remote mode	-	
	bussor		
option			

.

,

data	

>

#### DATA PROCESSOR <

data pi	rocessor					
	,				•	
	head	DP				
	с	с	DP HEAD		가	head
data	0 None OFF		HEAD DP	DP	data .(	)
DATA	None None		HEAD DP	DP	data .(	)
DATA	None	None		DP DAT	[data D A	head ATA 가
	XYZ /	XYZ	DP HEAD			
(CMCparameter user index	p.76 None	p.76 None	DP HEAD HEAD DP			
			DP HEAD			
			DP HEAD			
Baud rate	9600	19200	HEAD DP			
DATA	OFF 1	OFF 1	DP HEAD			

#### ON/OFF

- < 0N>
- 1. (|)

.



- < OFF>
- 1. (O) .


< DATA PROCESSOR ON , 가 DATA PROCESSOR DATA



>

,

Measuring head is removed

>

<

"DP "가

is connected



가.

,

Data processor is connected

<AUTO POWER SAVE >

.

.

, 3 , POWER SAVE . POWER SAVE , POWER SAVE . POWER SAVE , , auto power save



[POWER SAVE]

<data > data . 가 AC ON , . 가 AC FULL 10

- 37 -

,

		i	
			, DATA / .
			/ .
		0.55	/
	OFF/ON		. ( )
			DATA 가 2000 , DATA
	0 == (0.1)		/ .
DATA	OFF/ON	OFF	OFF , DATA가 .
			ON 2001 .
	1~30	1	
			C/D65 .
	C/D65	с	7
		-	
			ERROR 7
	OFF/ON	OFF	30
			BUZZOR ON/OFF
BUZZOR	OFF/ON	ON	
DOZZON			
	XYZ.Yxv.L*a*		, , , , , , , , , , , , , , , , ,
	b*.		
	Lab.L*C*h		
	Lab.L*C*h.		
	(C		
	1994   ab99		
	Ch99		* off
	CIE2000		, , ,
	CIE WI		* off
			* 71
	) WLASTM		
	E313(C )		
	D1925(C		
	) YI ASTM		
	F313(C )		
	0301		
1		1	





4. , **Esc** 

- 39 -



<

>

.



- 40 -









Displayed color limit screen (Page 1 of 2)



7		Measure Enter

*		[	DATA]
	D 4 T 4 1		

[ DATA]

[ DATA] \* ,

,

DATA	( DATA, DATA, DATA)
	ON
	OFF
DATA	OFF
	1
	СНОО
	С
	XYZ,Yxy,L*a*b*, Lab, L*C*h,
СМС	1.0:1.0
	OFF
BUZZOR	ON





## < > ( ) XYZ, Yxy, L\*a\*b\*, Lab, L\*C\*h, (C ), CMC(1:c) CIE1994, Lab99, LCh99, CIE2000, CIE WI Tw(D65 ) YI ASTM E313(C ), USER INDEX



*	6	가

(O: Valid, X: Invalid)

angenes-mer	Symbol		Illuminant Display		Displayed	color limit	Changing display				
Color space	Absolute	Color	C	DAS	C	D65	Abeniute value	Color	Aluminia mina ariar dilitana	Jodgement	Color differ
XYZ	X Y Z	AX AY AZ	O	O	CIN	ON	Ø	0	0	0	0
Үху	Y X Y	AY Az Ay	0	o	ON	ON	0	0	0	0	0
L*s*b*	L* #* 6*	ΔL* Δ* Δ* Δ*	0	٥	ON	ON	0	0	٥	0	0
Houter Lab	L a b	AL Az Ab AB	0	0	ON	ON	0	¢	0	0	0
L*C*h	561	АL* АС* АН* АВ*	O	0	ON	ON	0	0	0	0*1	0*1
CMC (be)	Lº C <sup>a</sup> h	ALC ACC AHO CMC	O	0	OFF (1.0:1.0)	OFF (1.0:1.0)	0	O	0	0*1	0•1
CIB1994	ւ. Եր	ΔL94 ΔC94 ΔH94 ΔB94	O	0	OFF	OFF	0	0	0	0*1	0*1
Lab99	1.99 199 199	AL99 Ax99 Ab99 AB99	0	0	OFF	OFF	0	0	٥	0	0
LC199	199 C99 169	ΔL99 ΔC99 ΔE99 ΔE99	Ø	0	CIFF	OFF	0	O	O	0*2	0*2
CTR2000	Р.С.в.	AL00 AC00 AB00 AB00	0	0	OFF	OFF	0	0	0	0*1	0*1
WI E313	WI	∆wi	0	x	OFF	-	0	0	0	0	(Abecins Minetocias
YI D1925	YI	AYI	0	x	CIFF	-	0	0	0	0	(Abericate Televicator
YI B313	YI	AYI	0	x	OFF	1	0	0	0	0	(Abericate Televicator
Munsell	H V C	5	0	x	ON	1770	0	(Absolutio value)	(Absolute value)	(Abeoletic value)	(Absolute value)
CIB WI/Tw	WI Tw	AWI ATw	x	0	-	ON	٥	0	0	0	X (Abecilcie versionecolor difference)
Uner index *4	Up to 9	characters	0	0	(At mg/stm tion)	ON (At yagintra- tical)	0	(Abeninta value)	X (Ahaolata valuo)	X (Absolute value)	X (Abeckus value)

/

.

.

\*1: Graph display and judgement at ΔL\*, Δa\*, and Δb\*
\*2: Graph display and judgement at ΔL99, Δa99, and Δb99
\*3: Only screen display of data processor
\*4: The registration by only PC is available.

(O: Valid, X: Invalid)

> /

/

.

	Symbol		Color difference target color		Color difference tolerance type			
Color space	Absolute value	Color	Mossrement	Numerie input	Elliptical	Box-type tolerance	۸B	Box-type tol- crance and AP
XYZ	X Y Z	AX Ay Az	0	0	0	0	О (дв*)	о (дв*)
Үц	Y X Y	AY Ax Ay	Û	0	0	0	о (дв*)	(AB*)
L*a*b*	L. 1. b*	AL* AB* AB* AB*	o	0	0	0	0	0
Hunter Lab	L b b	AL Ab Ab	0	o	0	0	0	0
L*C*h	L'C h	аl* АС* Ан* Ан*	o	X	0*1	0*1	0	0*1
CMC (bc)	36.4	AL¢ AC; AH¢ CMC	0	x	0*1	0*1	0	0*1
CIB1994	L. C. h	AL94 AC94 AH94 AE94	¢	x	041	041	0	Ç#1
Lab99	1.99 1699 1699	AL99 A169 A1699 A1699 A1699	0	O	o	0	0	0
LC199	1299 C999 1699	AL99 AC99 AH99 AH99	o	x	0*2	0*2	0	0*2
(5782000	10.	AL00 AC00 AH00 AH00	0	x	0*1	0*1	0	0*1
WI E313	WI	AWI	0	x	x	0	x	X
YI D1925	YI	IYA	0	x	x	0	x	x
YI B313	YI	AYI	0	x	X	0	x	x
Mansell	H V C	=	X	x	x	x	x	x
CIE WI/Tw	WI Tw	ΔWI ΔTw	0	x	x	0	x	x
User index *4	Up to 9 cha	rician	0*3	0*3	x	x	x	x

.

\*1: Input color difference tolerance at ΔL\*, Δa\*, and Δb\*
\*2: Input color difference tolerance at ΔL99, Δa99, and Δb99
\*3: Input at XYZ color space
\*4: The registration by only PC is available.



DATA	(PAGE	)	
	DATA		(名)

## DATA DATA

L*	: "L"	"D" (Lighte	r or Darker)	
a*	: +R	-R / +G	-G(±Red	±Green)
b*	: +Y	-Y/ +B	-B(±Yellow or	±Blue)

## ( **(**)

, 3		. AC		
[ ](	, AC	)		
(Low battery) -	가	,	,	AC

(Battery Out) -	가	,	가	AC

C <sub>C -</sub>	С	С	С.	
D <sub>D</sub> .	D65	D65	D65	

P(ON) - , DATA 가 ON .
[ ] (OFF) - , DATA 가 OFF .
Total data - .





, L\*a\*b\*

.

\_

]

(

L\* a\*

b\*

Х

[

\* \*

\*



Out of the color difference tolerance

,				T01	[0001]
				PASS/FAI	L
				P000101	9 [0001]
:					
:	,				
:					
Tal	[0001]	TDI	[0001]	TD1	[0101]
PASS/F/	ATL	PASS/F	IL	PASS/F/	UL.
	PASS	Ì	IARN	1	AIL
	IPI [0001]	P00<21G	P [0101]	P 0 0 (2) (C	(0101)







,

.

,

,

,







,

, [

] [

]



)

(

,

- 52 -









DATA가 .



.

가 ON

가

,















Edit screen





Δ##= Δb#= ΔE#=

AE+= 0, 11 P10 E P [0001] Measurement screen







Measure Enter

5.	ten			data
*	0.01	X,Y <z< td=""><td>160</td><td></td></z<>	160	
[]		ТО	2	
$L^* = 60.$	72			
a* = +20	0.32			
b* = +12	2.21			



Setting screen

L\*a\*b\* Lab , a\*b\* a\*b\* .

a b

Measure Enter

,



.

.

.

가

.

- 6. data , \*
- data가











9



Setting the color difference target color name (example)



.

가 .





2.

Esc

<

>

.

Target Symbol



Color difference target color screen







,





2.	ready la	mp가		,	Measure Enter		
*	,	data가	,			가 on	data가







60



•



Measure Enter

ready	Iamp가			,
3~8				

.

7.

8.



\* data , 2000data . 2000data , data data



\* Press the Print/Paper Feed key anytime you want to print out the data displayed in the LCD.



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Target Symbol

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1.

2.





Color difference target color is set to T00.

	TAR New To2 To1 To1	GET]	1/1
P	10	CB	[0    0  ]

[TARGET] 1/1 NEW TI2 TI1 TI0 POI [2] [2] [1001]] List screen





8. ready lamp가

- \* , data
- \* , .
- \* data . / data
- data , / , data , , , ,data

6

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data가

page

- , data( 2000data) 100page(p.00~99) . , 20 , data page 00 . , page01 , 50 , page data , data
- 2000 가 .

\* , data list key data , page . , page 00

data 가 off , 100page , page , page가, , .







page





Measurement screen







TOP		[0001]
L+=	74.	72
2 * =	11.	12
b ==	11.	21
AL+=	+0.	11
48#=	-4.	41
∆b+=	+1.	18
<b>∆E</b> ≠=	١.	18
POI C	P	[0030]

Measurement screen





page	data
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F	rint ]	
F	eed	
3	DEF	

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data

[DATA LIST Oprint sub	] Ject
Notolo Pall Meas.	DATA
EXECUTE	iter]
	tonanı







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results screen


P00 (	n=0010	}	
	0	2Y01M25	D 12:06
	0	2Y01M25	D 12:09
	∆L¥	×s∆	Δb*
MAX	-0.02	+2.23	+17.22
MIN	-8.43	+0.05	+0.0
AVG	-3.87	+1.22	+7.30
SD	3.47	0.90	7.24
	<b>∆</b> E <b>*</b>		
MAX	19.30		
MIN	0.06		
AVG	8.45		
SD	8.04		

[MAX]	(MIN)
AL* -1.12	-8.41
Aa* +2.28	+0.05
Ab*+17. 22	+0.01
AE# 11.30	0.06
[AVG]	[8D]
AL# -1.17	3.47
As+ +1. 22	0.91
Ab* +7. 38	7.24
AE0 1.45	8.04

[Setting conditions] Select L\*a\*b color space and color difference display

# DATA DATA , DATA , 1DATA, PAGE , PAGE 4 가 .





# < 1DATA / >



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DAT PO2 PO1 PD0	A LIS'	1 1/1
POD	CP	[0030]
	List scr	reen

.

2. PAGE .	[DATA LIST] 1/1 New P02 ▶P01 P00 P00 [] [P] [0020]
3. * PAGE DATA . , DATA 가() .	TOO       [1010] $L = 74, 72$ $B = 15, 32$ $b = 10, 21$ $AL = +0, 11$ $AB = -0, 01$ $Ab = +0, 11$ $AE = 0, 11$ </td
4. DATA .	***DELETED**
5. / 2 ABC	Deletion screen
DATA DATA	
* , DATA .	

## <PAGE / PAGE >





- 76 -

selected page

#### OPTION

5 : : DATA : DATA DP

:

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1.

Option 4 он I

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2.





- 77 -

< > , , pass/fail , " " " , / / % 가) 가 가 data ( buzzor error on , 4 가 , :

: L\* a\* b\* , , . . E : . E : 3

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 ,0
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 data
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 p.[
 ]
 .

 \* " ", "user index"
 ,
 .

 \* "CIE WI Tw" "WI E313", "YI D1925", "YI E313"
 .

Y:0.01~99.99, xy: 0.0001~0.9999, yXY : 0.05~~80.00 (Offset) : -5.00~+5.00( , ) ( ) : -45~+45

( ): 10~100%

, "L\* a\*b\* .

, Offset, . . , Offset, . . 가 "L\* C\* h , "L\*a\*b\*" , "L99C99h99" , "L99a 99b99" , .

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2

data가





Setting screen

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Y:0.01~99.99, xy: 0.0001~0.9999, yXY : 0.05~~80.00 (Offset) : -5.00~+5.00( , )

- ( ) : -45~+45
- ( ): 10~100%

6.

Measure Enter

[TOLERANCE] OROTATION Aa\*-Ab\* +\_0. 0 Aa\*-AL\* + 0. 0 Ab\*-AL\* + 0. 0 OWARNING LEVEL 101% P00 C P [0101] Setting screen

7. ten

Measure Enter



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6 .

- 81 -

POD C P (0001) Setting screen



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Ε,

E\*, E, E94, E99, E00, CMC

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Setting screen





Measurement result





Setting screen



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∆b\* 0 5 5 ñ. C P [0001 п Measurement result

[000]

[0001]

#### < >

cancel



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- \*
- \*
- \*
- \*

- 87 -

## < data >

data DP



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- DATA , DATA 가
- 1.

- 2. Heasure Enter . \* , DATA
- .
- \* page data가 , data .

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\* data 가 2000 , data





#### User Index

- \* , 가 . , user index , , .
- \* 가 PC , 6 . DP , .

\* User Index , CR-400 S/W CR-S4w S/W CR-S3w가 User Index , CR-S4w, CR-S3w .

# , RS-232C PC , PC DATA , RS-232C DATA , AC (AC-A17) .

Item	Setting	
Baud rate	19200bps	
Charactor length	8bit	
Parity	None	
Stop bit	1 bit	

## • RS-232C connection cable pin number/signal connection diagram



<	>		DATA			
USER	<u> </u>		DATA	,	,	DATA
	3		· 가 가 .			
<	DATA	>				
	DATA	가	Yxy, L*a*b* 2가 .			

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Ready lamp õ Calle (10)→] 1 2,4,6 8,11 Т 114 DER Display Option Calor Space 4 .... 1 10. . 8 Data List Statistic Page 7 PRM 1 TUF 1 1072 3,5,7,9 10,12 11 Bec index Set Target Baler U. 19 ۵ in the second -Specimen

[CALIB.] CWHITE CALIB. Y=_83.5 x=0.3114 y=0.3191
USER CALIB.

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2.

1. \*

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POD C P [0001] Calibration screen

[CALIB.] CWHITE CALIB. Y= 93.5 x=0.3114 y=0.3190

USER CALIB.

POL C P [0001]





- 93 -



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2.

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data

VALTICAL. POI CIP [0101] Selection screen [OPTION] TOLERANCE AUTO MEAS. DATE & TIME IMPORT MALTICAL. POI CIP [0101]

3. Heesure Enter . : .	[WALTI CAL.] 1/1 All Channel8 ▶White Cal. Tile Ch0? Ch01
Ch** : .	PDI C P [0101] Selection screen
4. " " .	[MALTI CAL.] 1/1 ▶ALL CHANNELS White Cal. Tile Ch02 Ch01
	PON CI (2) (0001)

5.

Measure Enter

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< user가

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data



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2.

Option 4 GHI

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- 96 -

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Measure Enter

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POD CO P [0001]

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Measure Enter

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3.

Measure Enter

USER CALIB. PIO CE E [0001] Calibration screen [CALIB.] Owhite Calib. Y= 93.5 x=0.8114 y=0.9180 USER CALIB. PIO CIP (0000) Calibration screen CALIB.] OUSER CALIB. NEW Ch02 171 Ch01

POI CE [0001] List screen

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, , , data processor , , , . , , , , ,

. 2 , 가 . , data 가 . , data, data ,

, data, data , , offset .





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\*

data



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Body . ( Data , Master Body Data )