

TOSHIBA

TOSHIBA Barcode Printer

BX420 Series

Supply Specification - Appendix -

00.0 Edition: May, 2025

Table of Contents

Appendix 1:	Approved media	1
Appendix 2:	Approved ribbon (combination with the media).....	2
Appendix 3:	Print speed and print density fine adjustment value by supplies	3
Appendix 4:	Peel-off	7
Appendix 5:	Fanfold media (Reference value).....	7

Disclosing of the appendix pages outside of the Toshiba Tec group is prohibited.

Appendix 1: Approved media

Type		Manufacturer product number	Thickness (μm)	Total thickness (μm)	Manufacturer	Remarks	Supported models	
							G	T
Label	Direct thermal	150LA-1	82	153	RICOH	General purpose	★	★
	Thermal transfer	FR-1412-50	50	160	Lintec	White PET	○	○
		FR-1615-50	50	-	Lintec	Silver chemical mat	○	○
		VES-85 (FR5311-85)	85	-	OSP	Synthetic paper for thermal transfer (Yupo)	○	○
		Vellum	-	-	Raflatac	Uncoated paper	○	○
		TPNS	73	148	OSP	Uncoated paper	★	★
		TT2C	82	155	Fasson	Coated paper (gloss)	○	○
Tag	Direct thermal	130LAB-1-150	-	150	RICOH	High preservation DT tag	○	○
	Thermal transfer	IBEST-S	-	164	OSP	TT Tag	○	○

Notes:

The printing conditions may differ for each media.

1. The use of synthetic thermal paper shortens the head life.
2. When using a cutter, do not cut the labels which have glue.
3. The reference media (★) for the direct thermal is 150LA-1 and for the thermal transfer is TPNS.

For thermal transfer, the combination with the reference ribbon in Appendix 2 should be the reference.

Appendix 2: Approved ribbon (combination with the media)

Approved ribbon

Type	Model name for JP models	Model name for other than JP models	Manufacturer product name	Manufacturer	Applicable media	Supported models	
						G	T
WAX	-	AW5	AWX-FH	ARMOR	Vellum	○	○
					Transtherm 2C	○	○
	W10E	AW6F	AWR8	ARMOR	Vellum	○	○
					TPNS	★	★
					Transtherm 2C	○	○
					I-BEST S	○	○
	-	AW1F	AWR1	ARMOR	Vellum	○	○
					Transtherm 2C	○	○
	S2N	SW1	TR4085+	DNP	Transtherm 2C	○	○
WAX/RESIN (SEMI RESIN)	(A16N)	AG3	APR6	ARMOR	Transtherm 2C	○	○
					C6NS	○	○
					I-BEST S	○	○
		AG5F	APR1	ARMOR	Transtherm 2C	○	○
		SG3F	TR5080	DNP	Transtherm 2C	○	○
RESIN	A21(A22)	AS1F	AXR7+	ARMOR	VES-85	○	○
					FR1412-50	○	○
					FR1615-50	○	○
	-	AS2F	AXR8	ARMOR	VES-85	○	○
					FR1412-50	○	○
	-	AS4F	AXR1	ARMOR	VES-85	○	○
					FR1412-50	○	○
	DR1	SS3F	R300	DNP	FR1412-50		
	DR2	SS4F	TRV300	DNP	FR1412-50		

Notes:

1. The printing conditions (applicable printing speed, fine adjustment value of print density) differ depending on the combination of the ribbon and media. Refer to Appendix 3.
2. Reference combination "★"

Appendix 3: Print speed and print density fine adjustment value by supplies

The values in the table below are under the following environment temperature.

When 3 values are given:

Upper: 5°C, Middle: 23°C, Bottom: 3°C

when only 1 value is given: 23°C

<203 dpi>

		Ribbon			Media name	Print density fine adjustment						Approval method
		Product number				3 ips	6 ips	10 ips	12 ips	Energy type	Remarks	
		Other than JP models	JP models	Manufacturer								
FH	WAX	AW5	-	AWX-FH	Vellum							
					Transtherm 2C							
		AW6F	W10E	AWR8	Vellum	-2 -2 -6 [n]	-2 [n] -2 [n] -8 [n]	6 6 0	8 8 0	WAX1		Light approval
					TPNS	-4 -4 -6 [n]	-4 [n] -4 [n] -8 [n]	6 6 2	6 6 0	WAX1	Vellum substitutes	Full approval
					Transtherm 2C	-8 -8 -8 [n]	-6 -8 [n] -8 [n]	2 -2 -4	2 -2 -6	WAX1		Light approval
					I-BEST S	-4 -4 -08 [n]	0 [n] 0 [n] -08 [n]	4 [o,p] 6 -2	4 [o,p] 6 [o,p] 4	WAX1		Full approval
		AW1F	-	AWR1	Vellum							
					Transtherm 2C							
	SW1	S2N	TR4085+	Transtherm 2C								
	SR	AG3	(A16N)	(A16N)	I-BEST S	6 4 -2 [n]	6 [n] 4 [n] 0 [n]	8 [o,p] 8 [o,p] 4	-	Semi resin1		Full approval
					Vellum	4 2 -2 [n]	2 [n] 0 [n] -2 [n]	8 [o,p] 6 4	8 [o,p] 8 4	Semi resin1		Light approval
					Transtherm 2C	4 2 -4	0 -2 -2 [n]	8 4 2	-	Semi resin1		Light approval
		SG3	-	TR5080	Transtherm 2C							
	R	AS1F[*]	A21 (A22)	AXR7+	VES-85							
					FR1412-50	6 2 -4	4 0 -6	-	-	Resin1	★R1 reference media	Light approval
					FR1615-50							
		AS2F	-	AXR8	VES-85							
					FR1412-50							
		AS4F	-	AXR1	VES-85							
					FR1412-50							
		SS3F	-	R300	FR1412-50							
SS4F	DR2	TRV300	FR1412-50									
Direct (TAG)	-	-			130LAB-1-150	6 4 0	6 4 2	-	-	Standard		Full approval
Direct (Label)	-	-			150LA-1P-ST	0	-4	4	0	Standard	★ Standard reference media	Full approval

<300 dpi>

		Ribbon			Media name	Print density fine adjustment							Approval method	
		Product number				3 ips	5 ips	8 ips	10 ips	12 ips	Energy type	Remarks		
		Other than JP models	JP models	Manufacturer										
FH	WAX	AW5	-	AWX-FH	Vellum									
					Transtherm 2C									
		AW6F	W10E	AWR8	Vellum	2 0 [n] -4 [n]	-2 -2 [n] -8 [n]	4 4 -2	-	-	WAX1		Light approval	
					TPNS	0 -4 -8 [n]	-2 -2 [n] -8 [n]	2 2 -2	-	-	WAX1	Vellum substitutes	Full approval	
					Transtherm 2C	-4 -6 [n] -8 [n]	-6 -6 [n] -8 [n]	-2 -4 -8	-2 -4 -8	-	WAX1		Light approval	
					I-BEST S	2 -4 -08 [n]	-2 -4 -06 [n]	4 4 -2	8 6 -4 [q]	-	WAX1		Full approval	
		AW1F	-	AWR1	Vellum									
					Transtherm 2C									
		SW1	S2N	TR4085+	Transtherm 2C									
	SR	AG3	(A16N)	APR6	I-BEST S	4 2 -4 [n]	6 6 4 [n]	8 8 6	8 [o,p] 6 [o,p] 2		Semi resin1		Full approval	
					Vellum	2 2 -6	4 4 0	8 4 0		Semi resin1		Light approval		
					Transtherm 2C	-2 -2 -8 [n]	0 -4 -8 [n]	6 4 -2	4 2 -2		Semi resin1		Light approval	
		SG3	-	TR5080	Transtherm 2C									
	R	AS1F[*]	A21 (A22)	AXR7+	VES-85									
					FR1412-50	4 2 -4	6 4 -4	8 8 4	-	-	Resin1	★R1 reference media	Light approval	
					FR1615-50									
		AS2F	-	AXR8	VES-85									
					FR1412-50									
		AS4F	-	AXR1	VES-85									
					FR1412-50									
		SS3F	-	R300	FR1412-50									
	SS4F	DR2	TRV300	FR1412-50										
Direct (TAG)	-	-			130LAB-1-150	6 4 2	8 8 6	-	-	-	Standard		Full approval	
Direct (Label)	-	-			150LA-1P-ST	0	0	6	2 2 0	0 0 -2	Standard	★ Standard reference media	Full approval	

The explanation about the alphabet letters in the table is as below.

- [n] The Code39 serial barcode rank is F.
- [o] Printing of Code39 serial barcodes is not available.
- [p] Printing of ruled lines is not available.
- [q] Density adjustment in the plus direction is required when blurring has occurred in the batch mode.

Notes:

1. Depending on combination of the media and ribbon, when printing is attempted in a lower temperature environment below that for guaranteed operating, a restriction in the software is applied and thus the print may be squeezed even if the print density fine adjustment value is increased since the absolute energy rating value is exceeded.
In such a case, reduce the print speed.
2. Depending on the combination of the media and ribbon, smudging may occur in an area pressed by the heater element of the thermal head due to the characteristics of the ribbon ink in a high temperature environment (35 °C or higher). In such a case, use it in an environment below 35 °C.
3. Depending on the combination of the media and ribbon, stitching may occur due to printing conditions and conditions.
In such a case, performing the following items is recommended.
 - Reduce the number of dots to be printed at one time.
 - Change the print energy. (Finely adjust the print density to the minus direction.)
 - Change the print speed setting (make it faster).
4. When printing with the batch issue mode is performed under a high-temperature environment, streak-shape stains may occur due to heat storage in the head.
When this problem has occurred, it will improve itself with time.
5. Because the printer is used by the issue operation with a backward feeding performance, smudging of the ribbon may occur.
6. If a faster print speed is specified, kanji characters are sometimes distorted.
This problem will be improved by reducing the print speed or making the font size larger.
7. Depending on the combination of the media and ribbon, backward feeding smudging may occur during the cut mode.
In such a case, reduce the speed for the backward feeding (3 or 2 ips).
8. When printing with the cut mode in the thermal transfer method is performed and if there is a solid black area at the leading edge, color unevenness may occur.
When this problem has happened, reduce the print speed.
9. If wrinkles have occurred in the ribbon as a result of the combination with the media, reduce the print speed.
If printing is attempted in a one-sided manner or a print ratio relative to the width of the ribbon is used, wrinkles may appear in the ribbon.
Confirm the description in "3.5 Precautions".
9. "★" in the media field indicates the standard media.
10. "-": Not available

Precautions for approved supplies

Precautions for approved media

1. The life of the print head varies depending on the print pattern (print ratio).
2. At the time of factory shipment, the transmissive sensor and the reflective sensor are adjusted using the standard labels and tags for the inspection.

Therefore, it is sometimes required to adjust the sensors by the media used by users.

Moreover, if a media feeding error has occurred, adjust the sensors by using the media to be employed.

Precautions for approving ribbons

1. Printing conditions and media to be used may vary depending on the ribbons.

Precautions for the print density adjustment

1. The values for the print density adjustment in the above table are the recommended ones. Therefore, when using, be sure to first consider the variations of the printer.

2. Follow the above tables for the energy type setting.

For details about the energy type setting, refer to the Key Operation Specification.

3. When a resin ribbon marked with [*] is used at the print speed of “6 ips”, printing may be blurred if the temperature of the print head becomes high.

Normally, this can be improved by the print tone fine adjustment. However, blurred printing sometimes cannot be improved in such a manner. In such a case, set “3 ips” for the print speed.

4. To protect the thermal head from the rating of the maximum supplying energy, the print tone fine adjustment is limited.

Even if a value larger than the one described in the tables in Section 3.3.2 is set for the print tone fine adjustment, the print tone does not become darker.

Appendix 4: Peel-off

Temperature, humidity	5 to 40 °C Relative humidity: 75% or below
Print speed	203 dpi: 3 ips, 6 ips, 10 ips 300 dpi: 3 ips, 5 ips, 8 ips
Media core I.D.	φ76.2 mm
Winding direction	Outside wound, Inside wound
Media type	Approved media
Linters	7K, 8K or equivalent

Appendix 5: Fanfold media (Reference value)

Temperature, humidity	5 to 40 °C, 25 to 85%
Print speed	203 dpi: 3 ips, 6 ips, 10 ips, 12 ips, 14 ips 300 dpi: 3 ips, 5 ips, 8 ips, 10 ips, 12 ips, 14 ips
Media	PD-A (landscape) 50x85, PD-B (landscape) 60x92, PD-B (portrait) 92x60, PD-C (landscape) 80x115, PD-C (portrait) 115x80

Notes:

1. Fanfold media is a folded (bellows) finish rather than a roll.
2. Check in advance with the fanfold media before actually using.
3. The peel-off mode is not recommended since breaking at the perforations may occur.

Toshiba Tec Corporation

Copyright ©2025 Toshiba Tec Corporation All rights reserved

BS25002100-EN